



**SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF COMPUTER SCIENCE AND INFORMATION
TECHNOLOGY
DEPARTMENT OF SOFTWARE ENGINEERING**

**THE ELECTRONIC
DECLARATION OF VAT
(TAXATION CHAMBER CASE
STUDY)**

**الإقرار الضريبي الإلكتروني للقيمة
المضافة
(ديوان الضرائب)**

**THESIS SUBMITTED AS A PARTIAL REQUIREMENTS OF B.Sc.
(HONOR) DEGREE IN SOFTWARE ENGINEERING**

OCTOBER 2016

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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THE ELECTRONIC DECLARATION OF
VAT (TAXATION CHAMBER)**

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October 2016

الآية

بسم الله الرحمن الرحيم

قال الله تبارك وتعالى :

﴿يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ
أُوتُوا الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ
خَبِيرٌ﴾

صدق الله العظيم
(سورة المجادلة الآية 11)

الحمد لله

الحمد لله الذي بعزته وجلاله تتم الصالحات، يا رب لك الحمد
كما ينبغي لجلال وجهك وعظيم سلطانك، اللهم اغفر لنا وارحمنا
وارض عنا، وأصلح لنا شأننا كله، اللهم أحسن عاقبتنا في الأمور كلها،
وأجرنا من خزي الدنيا وعذاب الآخرة، الحمد لك يا من أظهر الجميل
وستر القبيح، يا من لا يؤاخذ بالجريرة ولا يهتك الستر..
الحمد لله الذي جعل لنا من العلم نوراً نهتدي به وبعد :
نتقدم ببحثنا هذا الى زملائنا وزميلاتنا والى كل من يجمعنا بهم
رباط العلم من مستمعين وقراء ومدرسين ونرجو ان يكون في
المستوى المطلوب ونأمل اننا على الاقل لم نقصر ولم نهمل تبيان
جواهر عناصر البحث ونرجو من الاساتذه الكرام وكذلك اخواننا
التلاميذ ان لا يخلوا علينا بملاحظاتهم واقتراحاتهم البناءة لنصوب
اخطاءنا ونتفادي زلاتنا ونتلافى العيوب التي يمكن اننا ولا شك وقعنا
فيها.. والله نسال ان يديم نعمته علينا وان يهدينا سواء السبيل
ونسال الله عز وجل ان يوفقنا ويجعل النجاح حليفنا.

الإهداء

إلى أمي التي زودتني بالحنان والمحبة
إلى أبي الذي لم ييخل علي يوماً بشئ
إلى أهلي وعشيرتي
إلى أساتذتي
إلى إخوتي وأسرتي جميعاً
إلى زملائي وزميلاتي
إلى الشموع التي تحترق لتضيء للآخرين
إلى كل من علمني حرفاً أصبح سنا برقه يضيء الطريق أمامي
نهدي هذا البحث المتواضع راجين من المولى عز وجل أن يجد
القبول والنجاح

شكر و عرفان

الشكر اولاً لله عز وجل الذي وفقنا لاتمام هذا البحث ثم من بعده الشكر لجامعة السودان للعلوم والتكنولوجيا منارة العلم ومنبع العطاء التي اتاحت لنا فرصة الدراسة ويبقى لنا دائماً العجز في وصف كلمات الشكر خصوصاً للأرواح التي تمضي خلال الأيام والتي تتصف بالعطاء بلا حدود ودائماً هي سطور الشكر تكون في غاية الصعوبة عند صياغتها ربما لأنها تشعرتنا دوماً بقصورها وعدم إيفائها حق من نهديه هذه الأسطر واليوم تقف أمامنا الصعوبة ذاتها ونحن نحاول صياغة كلمات شكر إلى ينبوع عطاء تدفق بالخير الكثير ليروي هذا المكان ويدعم أسسه وقواعدهي مساحة بسيطة نخصصها لأشخاص اعطوا وما زالوا يُعطون الكثير يحملون بين حناياه القاضي والداني بكل ثبات وعزيمة وصبر نحن هنا لنطرز لهم من خيوط الشمس اللامعة كلمات شكر ومن ماء الذهب كلمات عرفان وجميل على ثقة منحونا إياها نخص بالشكر المشرف **الاستاذ/ الشريف هجو المقدم** لما بذله من مجهود في مساعدتنا وتقويمنا لاتمام هذا البحث .

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ونسأل الله التوفيق

ABSTRACT

The VAT (Value Added Tax) played an important role in influencing the state's economy. The study turning to these problems: The Supreme Administrative cost of the taxation chamber in printing the declarations that was filled by the taxpayers, The taxation chamber employees provide great effort in entering and saving declaration's data, The declarations must be received in specific period of time which causes overcrowding in the taxation chamber during this period, the difficulty of the taxpayer to access the taxation chamber in the specific tax payment period which consequent fine when lack of being in time, therefore the system eases the process of payment via an online service that enables the taxpayer to reach the taxation chamber easily and without making a great effort from anywhere he resides.

The system was applied by using odoo technique that connect all departments of the organization together.

The system was applied in the taxation chamber and find out these results: reduce administrative cost, easily saving and retrieving data, reducing the cost of the taxpayer, reduce fines, opening a new channel between the taxpayers and the taxation chamber.

المستخلص

تلعب ضريبة القيمة المضافة دوراً مهماً في التأثير على اقتصاد الدولة. تطرقت الدراسة الى المشاكل التالية: الجهد الكبير المبذول من قبل ديوان الضرائب في توفير الاقرارات الورقية لدافعي الضريبة، والعبء الكبير على موظفي الديوان في ادخال بيانات الاقرارات الشهرية في قاعدة البيانات التي تخصهم، ازدحام مكاتب الديوان بدافعي الضريبة في نهاية الفترة المحددة لتقديم الاقرارات مما يسبب ارباك للموظفين وصعوبة امكانية وصول دافع الضريبة الى مكتب الضرائب في الفترة المحددة لسداد الضريبة والتي يترتب على عدم وصوله فيها غرامات مالية، وعليه يقوم النظام بتسهيل عملية دفع الضريبة عن طريق خدمة الكترونية تمكنه من الوصول الى نظام ديوان الضرائب بسهولة وبدون بذل جهد كبير من أي مكان يتواجد فيه.

تم تطبيق النظام باستخدام تقنية odoo التي تربط بين ادارات المؤسسة وتم تطبيقه على ديوان الضرائب وبتطبيق النظام تم الحصول على النتائج التالية: تقليل التكلفة الادارية، حفظ البيانات واسترجاعها بسهولة، تقليل التكلفة لدافع الضريبة، تقليل الغرامات وفتح قناة جديدة بين دافع الضريبة وديوان الضرائب.

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Table of terms

Terms	description
VAT	Value added tax
ERP	Enterprise Resource Planning
OpenERP	Open Enterprise Resource Planning
XML	Extensible Markup Language
UML	Unified Modeling Language
PostgresSQL	Postgres Structure Query Language
TIN	Tax identifier number
TID	Tax Identifier
RT	Real Time VAT
VNL	VAT Locator Number
D_VAT	Digital VAT
ETRs	Electronic Tax Registers
KRA	Kenya revenue Authority
MTIC	missing trader Intra- Community

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

All countries need resources to spend them on the services which they provide. These resources vary depending on the types and philosophies of governance from country to country. Taxes are considered as main supplier.

Taxation is one of the oldest and most important Country financial resources compared to other resources that fund the Country Treasury. Its importance comes from their increasing role in public revenues. As well as the significant role that it plays in achieving the goals of the country's political, economic and financial status. In addition to that the magnitude of their effects on different levels of productivity and consumer sector was occupied by a large goods tax of financial and economic studies, so it became an instrument of country policy; which directly affects the country's economy.

Taxation is a very important factor in the financial investment decision-making process because a lower tax burden allows the company to lower prices or generate higher revenue, which can then be paid out in wages, salaries and/or dividends.

1.2 RESEARCH PROBLEM

The current declaration system has many problems such as:

1. The Supreme Administrative cost of the taxation chamber in printing the declarations that was filled by the taxpayers.
2. The taxation chamber employees provide great effort in entering and saving declaration's data.
3. The declarations must be received in specific period of time which causes the hustle and bewilderment in the taxation chambers during this period.
4. The taxpayers face a major problem that is caused when the declaration is not delivered in the specific period of time, thus forcing the taxpayer to pay a fine.
5. The previous point force the taxpayer to access the taxation chamber on time and fill in the declaration regardless of his circumstances, considering that the arrival to the taxation chamber to fill in the declaration or pay the taxes cause great financial and timing efforts.

1.3 RESEARCH OBJECTIVE

The research aims to achieve the following objectives:

1. To develop a system in order to manage the recourses efficiently, and organize workload.
2. To manage taxes from a tax record will help keeping it safe and affordable.
3. To improve the services provided to taxpayers by providing an easily used system and changing the manual process to an electronically process.
4. To increase efficiency by providing a public system and a high level of tax measure.
5. To provide ERP system all week around the clock.
6. To follow up payments and extract reports easily.

1.4 IMPORTANCE OF THE RESEARCH

This Research presents a solution by providing an ERP system which helps taxpayers pay their taxes via internet, which only needs a device with internet connection that is usually accessible anywhere and anytime. Using this ERP system helps in saving time and effort of the taxpayers.

1.5 RESEARCH SCOPE

This research improves the service provided to taxpayers by providing an easily used program and removes a lot of manual processes. The focus will be limited to the value added tax(VAT) monthly declaration, payment and audit.

1.6 RESEARCH STRUCTURE

Chapter one gives an introduction about the project, defining the problem, objectives, importance, scope and structure.

Chapter two contains two parts: Part one represents a general background about Taxes and their types and processes, part two is the related studies.

Chapter three explains the analysis, tools and techniques and UML design for the project functionality that used in the project. Chapter four contains the project implementation. Chapter five contains the results and discussion. Chapter six contains the recommendations and conclusion.

CHAPTER TWO

BACKGROUND TO TAXES AND RELATED STUDIES

2.1 INTRODUCTION

This chapter is divided into two sections, the first section gives general description of taxes and value added tax, and the second section describes the related studies to the research project.

2.2 TAXES IN SUDAN

The tax system has begun in Sudan as a small emerged Department in the Ministry of finance, profits for companies and individuals. It was specialized in one sided income. It was lesser than those other committees of local government proposed by the income tax act of 1971. Then the tax system expanded to include profit, rental, and personal income; besides the business income. From the year 1964 to 1968, tax management interest evolved and became a management that follows the Ministry of finance.^[2]

2.2.1 TYPES OF TAXES

A business must pay a variety of taxes based on the company's physical location, ownership structure and nature of the business. Business taxes can have a huge impact on the profitability of businesses and the amount of business investment, business may be required to remit the following types of taxes:

1. **Federal Income Tax:** A tax levied by a national government on annual income.
2. **State and/or local Income Tax:** A tax levied by a state or local government on annual income.
3. **Payroll Tax:** A tax an employer withholds and/or pays on behalf of their employees based on the wage or salary of the employee.
4. **Unemployment Tax:** A federal tax that is allocated to state unemployment agencies to fund unemployment assistance for laid-off workers.
5. **Sales Tax:** A tax imposed by the government at the point of sale on retail goods and services. It is collected by the retailer and passed on to the state.
6. **Foreign Tax:** Income taxes paid to a foreign government on income earned in that country.
7. **Value-Added Tax:** A national sales tax collected at each stage of production or consumption of a good. Depending on the political climate, the taxing

authority often exempts certain necessary living items, such as food and medicine from the tax.^[3]

2.3 VALUE ADDED TAX

The value added tax (VAT) is considered indirect taxes levied on the consumption of goods and services. Despite the relative modernity of this tax, it has been expanded to apply in the most economically developed countries of the world and developing countries as well.

VAT was applied in June 2000. It is levied on the increase in the value of goods and services at each stage of production, circulation and collection. Also the registered holders levied on the value of imports of goods, services at the stage of customs clearance and customs that are collected by police department.^[2]

2.3.1 THE CONCEPT OF VAT

VAT is considered the difference between the private facility of goods, services and selling price of bought materials and other production elements, including properties assets that go into the manufacture of goods and services ratio. Therefore the VAT is the increase in the apical goods and services as a result of the transfer material from another form poses a change of approach which leads to higher value at each stage.^[2]

2.3.2 THE SCOPE OF TAXATION

Tax levied on all goods and services by 17%, except for exempted under the law and subject of the price (zero). This price allows recovery of all value-added taxes paid on goods or services prior to export stage, on condition that the operations must be under the supervision of the General Administration of Customs Police and access to documents necessary to do so.^[2]

2.3.3 WHO IS IN CHARGE OF VAT?

All legal organization and economically active individuals people who supply goods or perform work or provide services:

1. Dealing with goods, perform work or provide services and have a turnover of more than one hundred and twenty thousand pounds.

2. Each importer and exporter of any turnover business.

If you are the supplier of goods and services which are exempt from the tax exceeds, and the annual number of your business fairly registration you should notify the local office of the VAT.

An exempted business owner doesn't obligate to register like those whom assigned to the VAT, but can be yield to subsequent visits from their exemption. ^[2]

2.3.4 THE APPLIED OF VAT IN SUDAN

Systems before applying the additive from indirect taxes are:

1. Tax excise duties: It was applied on local industries at varying rates and run overall management of corporate taxes.
 2. A sales tax: Applied to local industrial products and operated by customs polices and the services and managed by the tax chamber.
 3. Tax consumption on imports and at varying rates it managed by the customs police.
 4. Consummation tax on some domestic goods such as cigarettes and paints, cement, soda water, sugar, vehicles and petroleum it operated by customs police.
- ^[4]

2.3.5 THE TARGETS OF VAT TAX

VAT aims to reform the tax system so that it can achieve its desired goals as follows: Exports encouragement, local industrials encouragement, Increase tax revenues, achieve tax justice, and increase efficiently of tax system. ^[4]

2.3.6 PROCESSES OF THE CURRENT SYSTEM

2.3.6.1 THE REGISTRATION OF VAT:

The registration of VAT is done by the following process:

1. The Tax Identification (TID) system of taxation on the central registry of donors and taxpayers through its branches in the capital and the US are the registration procedures after getting an original and official documents of the applicant in accordance with specific form to open the file and after review and

completion of the filled register and get tax ID, and then convert the file to the competent office by specific standards.

2. Delivery of the companies and individuals records, the names of businesses, organizations, government bodies and diplomatic bodies' documents.
3. Review the Submitted documents and make sure that it is issued by the competent authorities and include the required data.
4. Visit the taxation chamber to make sure the information is correct and stand on the activity.
5. Create tax file.
6. Get the tax ID number, which is given immediately after providing the required data from the sub-administration.
7. Issuance of the certificate of registration of the system is subjected to VAT according to the model of compulsory registration procedures. After filling the required additional data.
8. Querying ID Tax Identifier Number (TIN).^[1]

2.3.6.2 VAT DECLARATION

Is a tool for communication and liaison between tax chamber and the taxpayer. But the complacency and failure to submit a tax declaration is a result of lack of awareness of the importance of this recognition.

The taxpayers identify the special acknowledgment and determine the tax base data and then calculate the amount of tax owed to the taxpayer so that the tax returns incorrect data, and supported by documents giving to the right competent tax administration to accept this recognition as long as the true supporter of documents, in order to save time and effort of the taxpayer and the tax administration.

Also considered a recognizing way to link the tax obligation to the taxpayer in order to voluntarily pay from the tax levy.

Notice that taxpayers filing the declaration monthly from the beginning to the middle of the month.^[1]

2.3.6.2.1 ADVANTAGES OF PROVIDING VAT DECLARATION

1. Declaration is linked to a self-funded determining where profits and revenues and thus determine the tax payable.

2. In the case of a declaration based on the non-permissible books and records that holds in for the benefit of non-validity of these false books and records.
3. Avoid the exposure of a non-perfect provide approval.^[1]

2.3.6.2.2 THINGS MUST BE CONSIDERED WHEN FILLING THE DECLARATION

1. It must include a declaration of all activities and all revenue.
2. Financier signing represents his legal representative.

2.3.6.2.3 WHAT COVERED BY THE VAT DECLARATION

It must be the recognition conforms to all of the data and the information contained there are:

1. Personal data
2. Full name with title
3. Trade Name
4. individual legal entity / partnership
5. Address: center address and the branch if it finds
6. Type of activity
7. Year / period provided by the recognition.
8. Number: Tax - or file number (exclusive)
9. Phone number and other personal data on the tax return

2.3.6.2.4 DATA RELATING TO THE VAT

1. You must conform all of the data in the declaration and the information contained there.
2. Detecting tax inputs or tax previously withheld documents and pictures.
3. Revealed sales or special period of month revenue provided by the declaration. Any decision must be fulfills all of the tax data and the information contained there.

2.3.6.3 VAT PAYMENT

2.3.6.3.1 PAYMENT PROCESS

Payment process consists of two phases. link the tax and collection it (payment).

Intended to link the tax: it is a decision of the Financial Management determines the amount that the taxpayer is committed to pay as a tax.

After issuing binding decision comes the last phase of the technical organization of the tax debts of any public treasury for the amount of taxes in accordance with tax legislation in force in the state.^[21]

The tax collection in several ways, including:

1. The general Origin: that the taxpayer committed to paid the tax to the administration of his own, without the intervention of the tax administration.

This method is more commonly known as the direct supply manner.

2. The tax may be paid by another someone not the person that charged of the payment, and is done by the person that charged to pay tax shall appoint another person

(legal charge) to pay the amount of tax to the Treasury that collects on the later of the effective charge.

3. tax collection through booking.^[22]

Secretary General may Instead of a suit of the amount of tax payable, issue an order by his signature that licensing of any employee in the taxation chamber to reserve the goods or belongings of the person collecting the tax from him as well as any other property, including its assets deposited with banks.

2.3.6.3.2 TAX DEDUCTION

The taxpayer when calculating the tax can be deducted from the tax payable on the value of sales of goods and services are already paid from month tax previously returns from sales and has already paid the tax on inputs, as well as the tax previously paid on goods sold in knowing the taxpayer in each stage of the distribution according to the limits and terms and conditions specified by the regulations.

In export cases, if the tax of the discount greater than the tax payable on the taxpayer's internal sales, the Secretary-General must return

the difference in accordance with procedures prescribed by the regulations. ^[22]

2.3.6.4 VAT AUDIT

Usually the value of the tax payable monthly declaration manipulated by tax holders. Therefore they access the taxation chamber to review each tax manually in order to validate the value that it is specified by the taxpayer. Self-recognition review enable turning the balance charge tax to a debtor or creditor of a credit balance is null or devalue the credit.

Audit process is one of the most important processes for determining VAT pot, the examination in accordance with sound scientific methods and techniques. ^[4]

2.3.6.4.1 What is VAT Audit?

Is a screening process to maintain books, records and documents specific accounting unit by a tax examiner to verify its secretariat and the health net accounting profit according to generally accepted accounting guidelines, and appropriate adjustments according to applicable tax laws, regulations and instructions issued by the competent interest organizational, operational and explanatory, to determine the tax base and therefore the tax due. ^[4]

2.3.6.4.2 AUDIT PROCESSES

This process contains three stages:

1. Request for Attendance

The Secretary-General or his representative request the taxpayer or any person with a written declaration to attend at the specific time and place set in the declaration

2. Immunity to Enter the Workplace

The inspector must be the Secretary General or his representative to enter the workplace: factories, stores, shops and establishments during work hours, and access any accounts or lists of income or any other documents or take them to the purpose of examination and revision. The Secretary General or his representative better be accompanied by appropriate personnel or Police Bureau to achieve this purpose. The taxpayer must provide any information requested from him.

3. Capture Accounts, Books, Lists and Documents

The Secretary-General or his representative captures any accounts, books or lists when he accesses the taxpayer location, to test them, in charge of implementation required by the Secretary General or his representative. To his query regarding the goods and services tax and any other matters relating to it (For the purposes of this article a person means: any person engaged in commercial activity has never been assigned in accordance with the provisions of this law). ^[12]

2.4 RELATED STUDIES

2.4.1 AUTOMATION OF ELECTRONICS TAX

AND VAT COLLECTION IN BANGLADESH ^[13]

The study was aims to investigate which factors affect diffusion of tax return filing online (e-return) in Bangladesh. Another aim was to develop an adoption forecast for the service. Finally, customer categorization was suggested in order to enable e-return deliver more public value by accommodating the needs of different customer groups.

Results:

As a result of the study, they discovered that the diffusion of e-return is dependent on such variables as perceived attributes of e-return system, interpersonal communication channels, performance of related services, and extent of Tax Administration's promotion efforts.

2.4.2 THE EFFECTIVENESS OF ELECTRONIC TAX REGISTERS IN PROCESSING OF VALUE ADDED TAX RETURNS PERSPECTIVES FROM REGISTERED VAT TAXPAYERS IN KISI TOWN, KENYA ^[14]

The study aimed at assessing in detail the effectiveness of Electronic Tax Registers (ETRs) in processing of VAT returns by taxpayers that were introduced to replace the earlier manual system of VAT processing. To enhance the accountability

systems for VAT, the Kenya revenue Authority (KRA) has spearheaded the introduction of the Electronic Tax Registers and Electronic Signature Devices.

Results:

The ETRs give inaccurate records and results for businesses that field sales; the ETR Machine is not applicable to service providers; and some businesses had already had point of sale software that did all calculations.

2.4.3 VAT FRAUD – TECHNOLOGICAL

SOLUTIONS

In the European Union missing trader fraud is commonly known as missing trader Intra-Community (MTIC) fraud, because an intra-Community goods transaction (a business-to-business sale between Member Countries) is the initial sale. This sale is zero-rated, thus the purchase is without VAT.

Results:

Three technology solutions are presented here. The Real Time vat (RT) and the Vat Number Locator (VNL) are applied to all transactions in a VAT system, and the (D-VAT). [15]

2.4.4 The IMPACT OF ELECTRONIC TAX REGISTER MACHINES ON VAT COMPLIANCE IN ETHIOPIA, THE CASE OF BAHIR DAR CITY

The study was aims to understanding the impact of ETRs machines on VAT compliance among VAT registered taxpayers empirically, in Amhara National Regional Country, taking the case of the city of Bahir Dar. The study used a sample of 176 VAT registered taxpayers and thus uses ETRs machines in the study area.

Results:

The results from the Multiple Logistic Regression analysis provide robust results for the impact of using ETRs machines on VAT compliance in the target

population. Thus, this empirical study provides additional evidence that using ETRs machines among VAT registered taxpayers does contribute to the improvement of VAT compliance among taxpayers in the target population. Moreover, the study findings confirm that the chosen explanatory variables for the study; the tax morale of the taxpayers, the probability of audit, tax fines and penalties all have their own role in explaining the VAT compliance attitude observed in the studied population. [16]

2.4.5 IMPACT OF STRATEGIC CHANGE: INTRODUCTION OF ELECTRONIC TAX REGISTER FOR ENHANCEMENT OF TAX COLLECTION AT KENYA REVENUE AUTHORITY^[17]

The study was to establish the effect of the change caused by implementation of the ETR project and if the ETR system enhanced the tax collection in Nairobi. The major findings indicated that ETR system had enhanced tax collection in business premises in Nairobi and that the system had to a great extent assisted in sealing loopholes of tax evasion in Nairobi.

Result:

The major findings indicated that ETR system had enhanced tax collection in business premises in Nairobi and that the system had to a great extent assisted in sealing loopholes of tax evasion in Nairobi. It was further found out that the stakeholders were yet to be trained effectively on the use of ETR machines. The system had also assisted in improvement on tax compliance. It was however established that the system is yet to be fully institutionalized in the KRA system. The study established that the Authority is still experiencing some resistance to change from both internal and external customers.

2.4.7 SUMMARY OF PREVIOUS STUDIES:

All previous studies have agreed to solve the problems of tax payment and the reduction of tax evasion, but they differed in the way of solving these problems by making an Electronics Appliances registration, billing machines and websites. While our project solve the problems by providing electronic declaration, payment and auditing.

CHAPTER THREE
TECHNIQUES USED AND PROPOSED
SYSTEM ANALYSIS

3.1 INTRODUCTION

This chapter includes two sections, the first is the techniques that used in this system, and the second is the proposed system analysis.

3.2 SYSTEM REQUIREMENT

3.2.1 FUNCTIONAL REQUIREMENTS

1. The registration of all customers and Administrator data on the same page to take the advantages of system services.
2. Login to the system via the log Screen that connect to Database (PostgreSQL).
3. Taxpayer filling declaration and pay the voucher.
4. System Administrator has the authority to change the system and to monitor the system.
5. The possibility to modify customer account in the inspection process by an admin.
6. The possibility to sending automatic report.
7. System Administrator confirms the login and the declaration.
8. System Administrator audits the declaration.

3.3 TECHNOLOGIES TO BE USED

3.3.1 ODOO

An integrated software system for enterprise resource planning (ERP) is Available for free as a ready-to-use and an applet source are adjustable according to the open source software license AGPL.

System consists of a basic platform and a set of software modules that provide the functionality of the program to the user, such as accounting, sales, procurement, warehousing, manufacturing, customer relations, human resources, and other points of sale.

Odooversion (8.0) is built using the Python programming language and uses the PostgreSQL database for its data storage.^[5]

3.3.1.1 ODOO FEATURE

1. "It satisfies all company specifications. You can side away the undesirable functions of this program, if you don't want them in your company procedure.
2. Custom ERP Application is a least servicing application.
3. It is less costly than packed resources.
4. Custom application can be quickly applied in flip structure within a company.
5. It reduces the possibilities of danger relevant to cut over of big projects.
6. This program is based on your company techniques, so that you should not pattern your company procedures to fit in the ERP program.
7. For those company procedures, which are fixed, Custom ERP remedy is best. For example, bookkeeping journal is a fixed procedure that does not significantly modify with time. For these company projects, this ERP is perfect.
8. This application is backed by experienced designers. If you experience any specialized problems in applying or performance, the designers are prepared with alternatives."^[7]

3.3.2 PYTHON

Python is an easy to learn, powerful programming language. It has efficient High-level data structures and a simple but effective approach to object-oriented Programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.^[8]

3.3.2.1 USES OF PYTHON LANGUAGE

Python language was used for programming in many applications, packages and is frequently used in design three dimensional applications. It is also used in various operating systems and is also used as:

1. Scripting language.
2. Program of geographical maps.
3. Package Office open source software.

3.3.2.2 FEATURE OF PAYTHON

1. Simple.
2. Easy to learn.

3. Free and open source.
4. High-level programming language.
5. Portable.
6. Supports most operating systems.
7. OOP language.
8. Extensible.
9. Extensive Libraries^[8]

3.3.3 XML

Extensible Markup Language symbolized by the abbreviation xml used to describe and store and organize data other than HTML which is used to display the data on the browser. It is noted that XML is not a language in the original, they describe a range of expressions that used to describe any language.

3.3.3.1 USES OF XML LANGUAGE

1. Simplify the process of data involved.
2. Simplify the process of changing the working platform.
3. Separate HTML data.
4. Used to create new Internet languages.

3.3.3.2 XML FEATURE

1. Data storage.
2. Exchange and sharing of data.
3. The ability to display data more than one way.
4. Easy to read.
5. Clear.^[9]

3.3.4 POSTGRESQL

The PostgreSQL is one of the most open source projects online and operates large numbers of applications, sites and even parts of the Internet infrastructure. In fact, some large and well-known organizations in the world are using the PostgreSQL frequently. PostgreSQL do not own to the company and not limit the development path as it evolves by volunteers from within the free source community. Invented by expert in databases technology Prof. Michael Stonebraker. In 1995 was known under the name of PostgreSQL95, the developer community as

the launch of the database PostgreSQL 6.0 to reflect the origin of the project and new features that added to it.^[10]

3.3.4.1 FEATURE OF POSTGRESQL

1. Integrity of the data.
2. More Extendable.
3. Characteristics completion.
4. Extension.
5. Support Platforms.
6. License free of trouble.^[11]

3.3.5 QWEB

QWeb is the primary templating engine used by Odoo. It is an XML templating engine and used mostly to generate HTML fragments and page. Allow creating variables from within the template, to memorize a computation.

.

3.3.8 UML

The Unified Modeling Language (UML) is a general-purpose visual modeling language that is used to specify, visualize, construct, and document the artifacts of a software system. It captures decisions and understanding about systems that must control information about such systems. Be constructed. It is used to understand, design, browse, configure, maintain, and control information about such systems.^[19]

3.3.8.1 UML GOALS

Reduce the cost, increase reliability, speed up the work, ease of modification and maintenance. UML diagrams help developers to understand the system easily and quickly, the language of communication between developers and designers, and has nothing to do with how the programming of these function.^[19]

3.3.8.2 UML FEATURE

Designed to give different points of view and abstraction, supports of high-level development concepts, give a complete picture of the program to be designed making it easier to visualize the full program, facilitates the maintenance process and get rid of the defects.^[19]

3.3.8.3 UML DIGRAMS

1. **Use Case Diagram:** It shows the relationship between actors and use cases.
2. **Sequence Diagram:** Show the chronology of objects participating in the interaction.
3. **Activity Diagram:** It describes the workflow of the system behavior.^[19]

3.4 AUTHORITY OF SYSTEM

The nature of work in institutions require that some of the processes depend on a specific person that person has the powers of the authorized person to perform this work.

1. Supports program (Open ERP) this type of procedures through the establishment of groups and control the show and hide or outsource some of the powers of these groups.
2. In the program (Open ERP) in this research was clarified through:
 - a. We amend a group to the director of the company, which has registered only from within the site.
 - b. After you enter the director of the company in the group in question is assigned a shelf life: (Access Read, Access Write) only to users of its system.
3. Manager can control the system in his account through the site.
4. The possibility of modifying the company's account through a personal page for the system administrator at the site.
5. Allows the manager to give each user its own validity.

3.5 SYSTEM ANALYSIS USING UML

3.5.1 USE CASE DIAGRAM

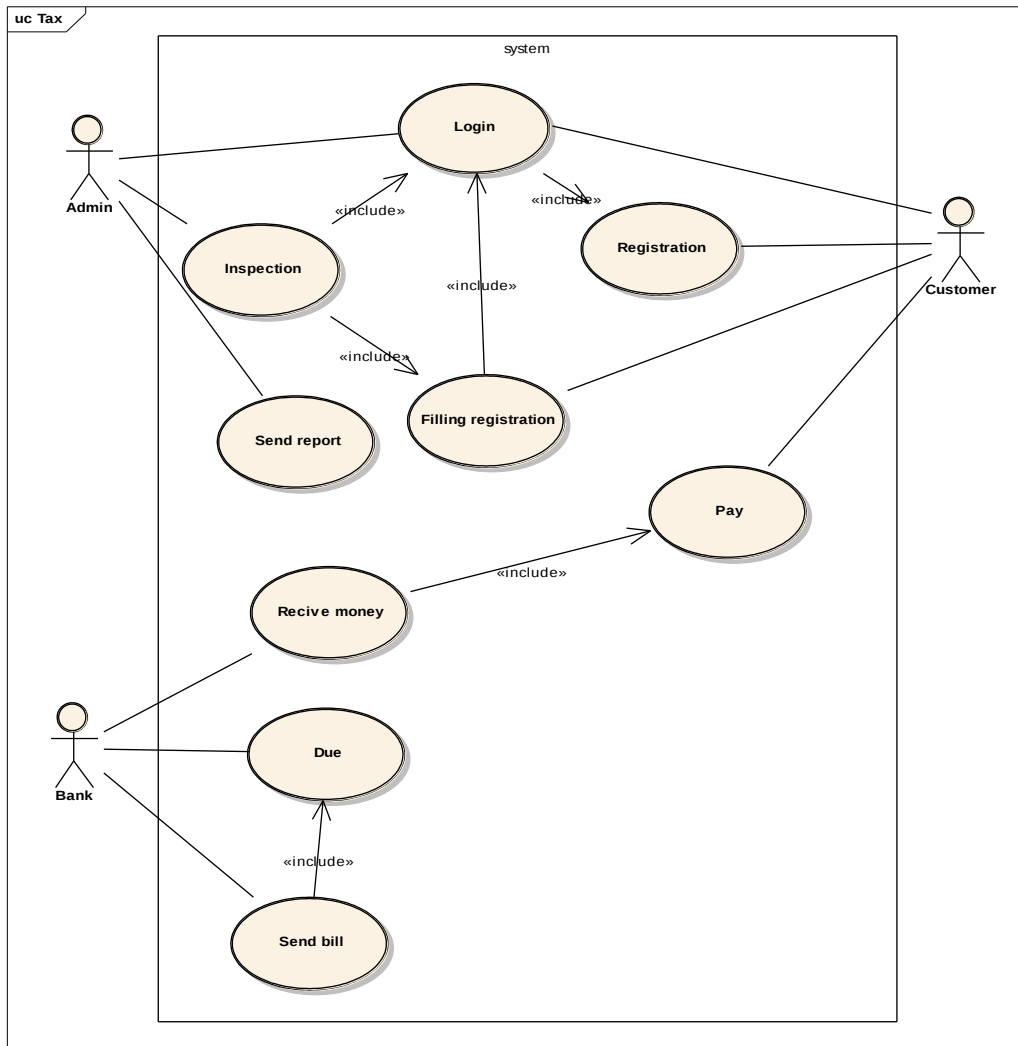


Figure (3.) Use case Diagram for System

3.5.2 SEQUENCE DIAGRAM

3.5.2.1 LOGIN DIAGRAM FOR ADMINISTRATIVE SIDE

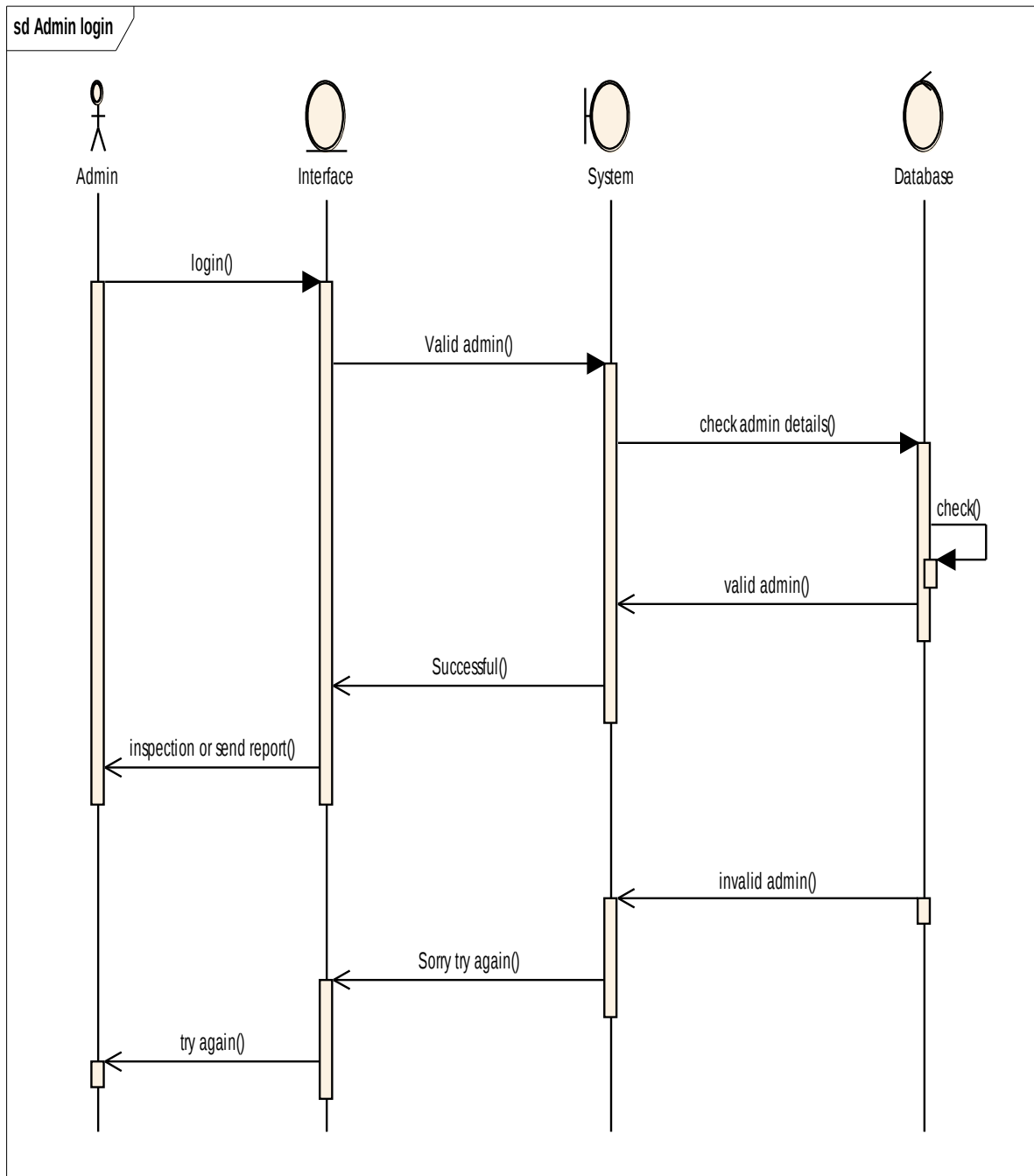


Figure (3.) Sequence Diagram login for Administrator Sid

3.5.2.2 REGISTRATION DIAGRAM

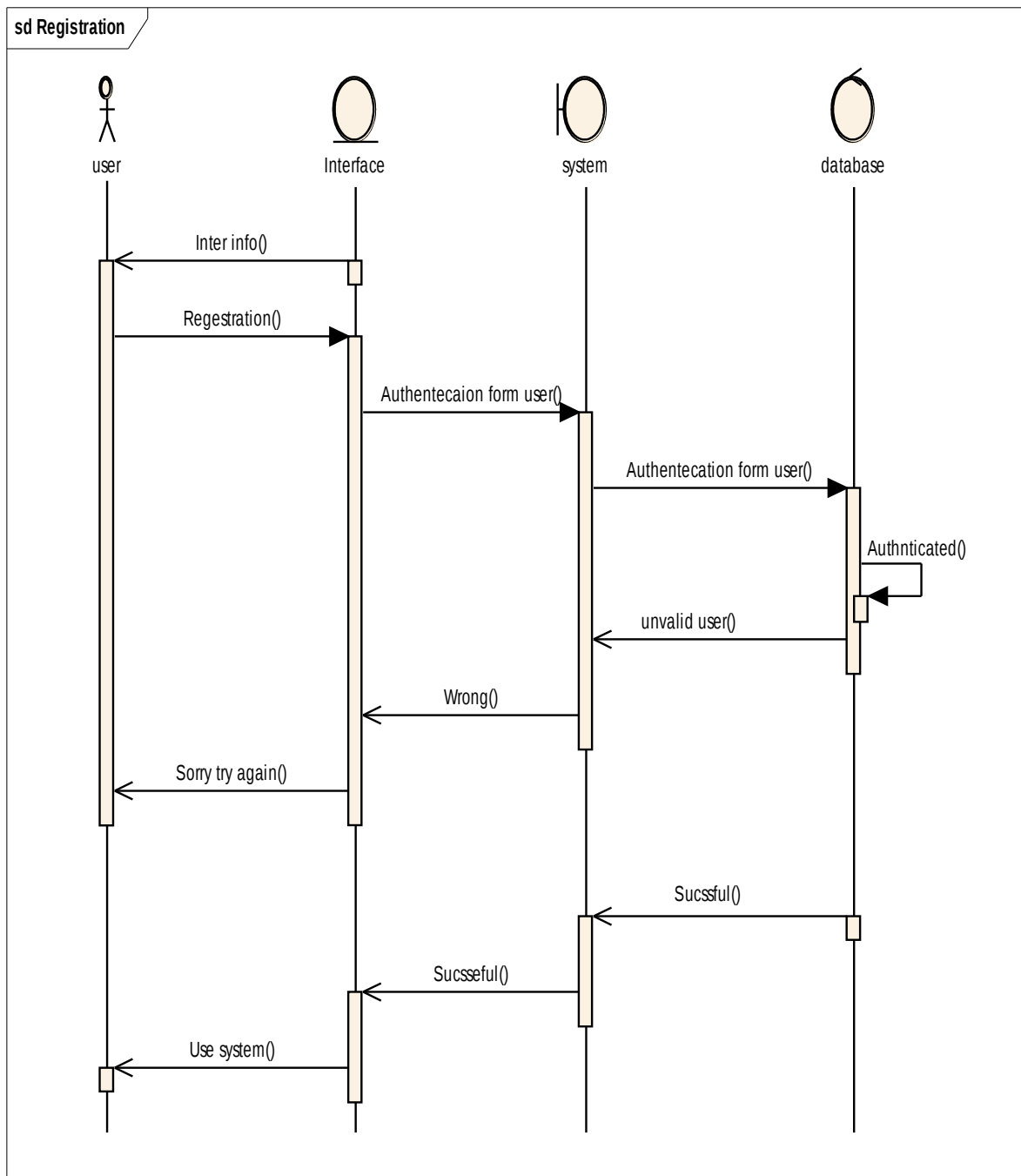


Figure (3.) Sequence Diagram for Registrations for user Side.

3.5.2.3 USERLOGIN DIAGRAM

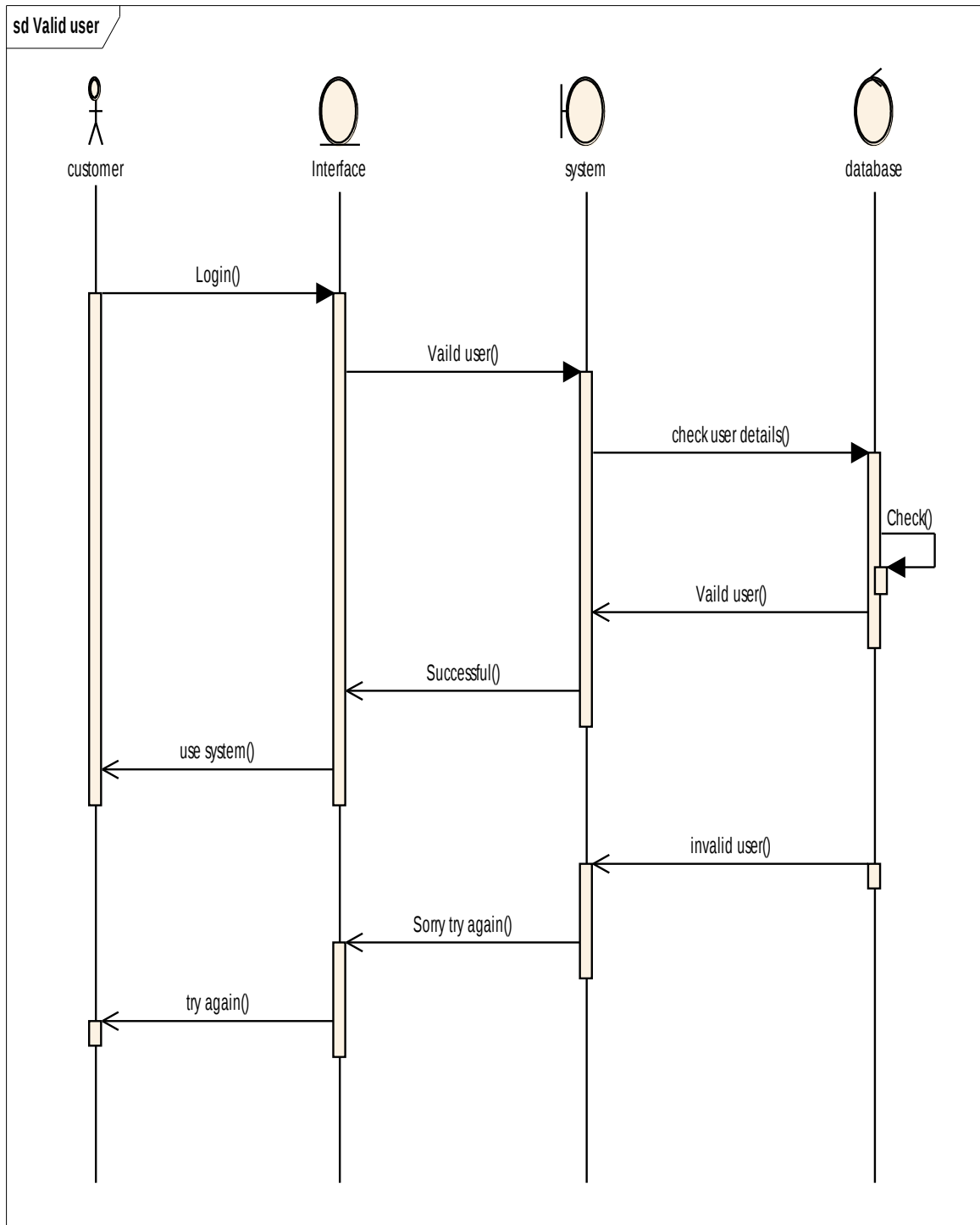


Figure (3.) Sequence Diagram for User Login.

3.5.2.4 FILLING DECLARATION DIAGRAM

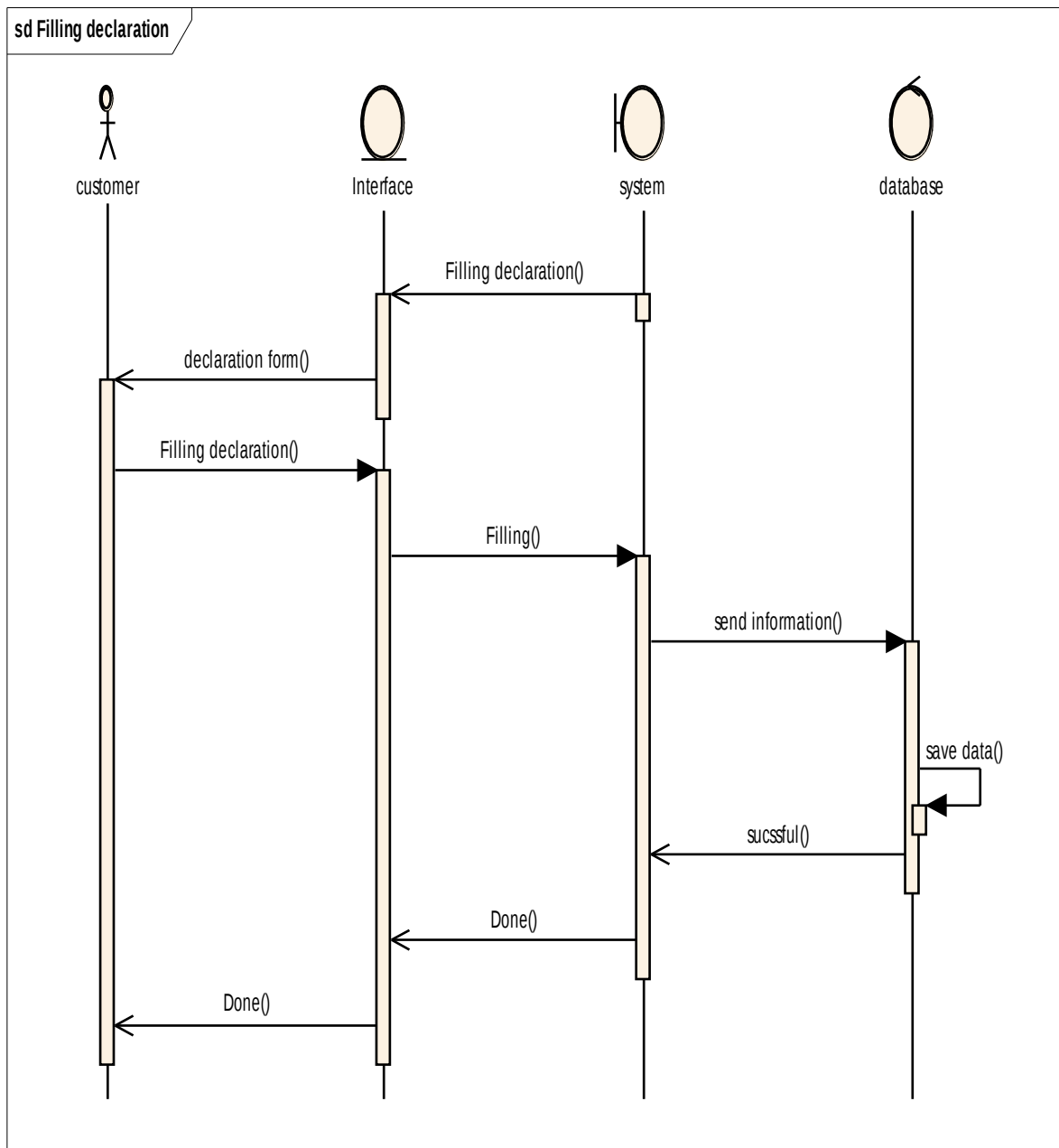


Figure (3.) Sequence Diagram for Filling Declaration.

3.5.2.5 PAY DIAGRAM

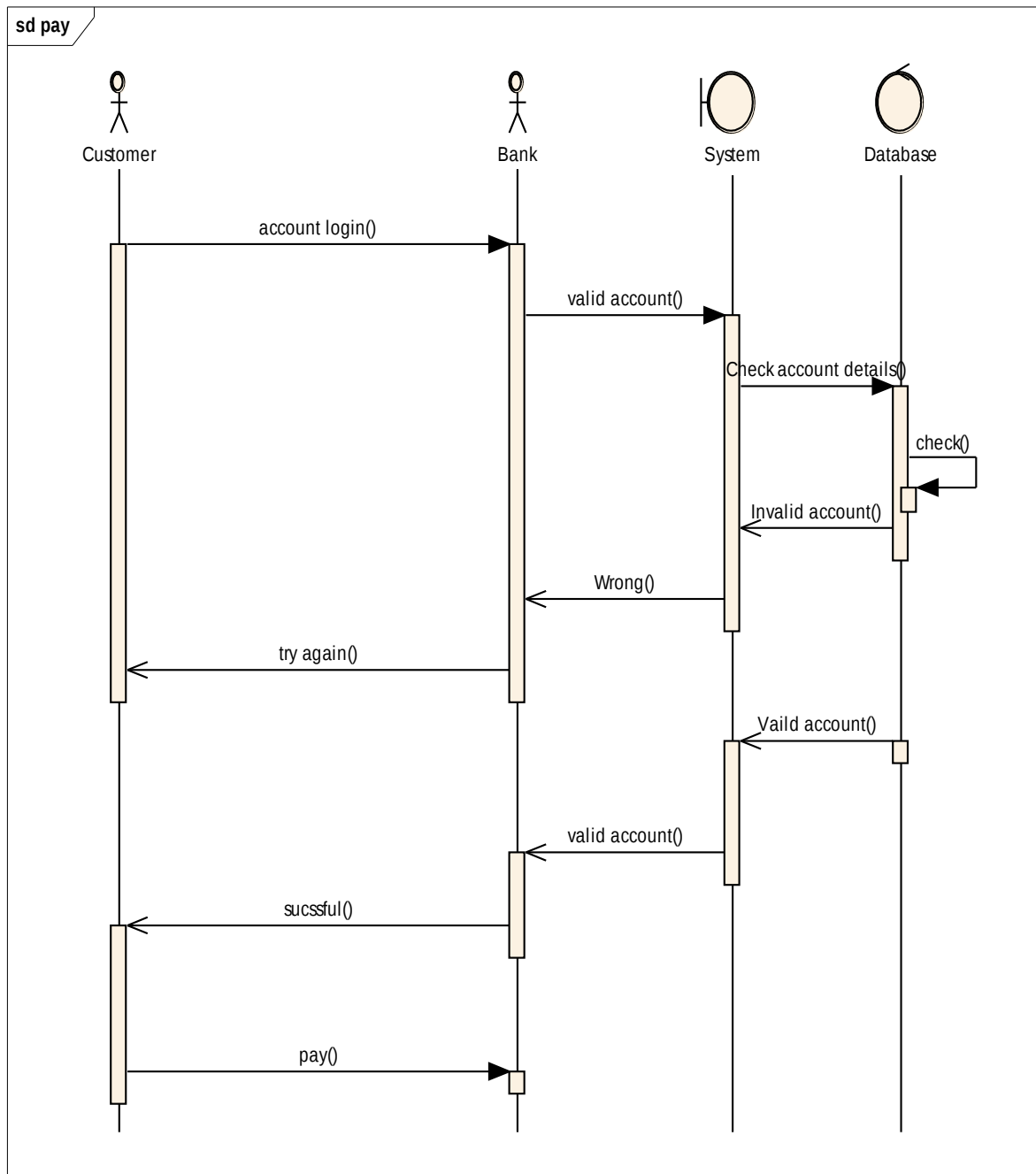


Figure (3.) Sequence Diagram for payment for user Side

3.5.2.6 DEDUCTION AND SEND VOUCHER

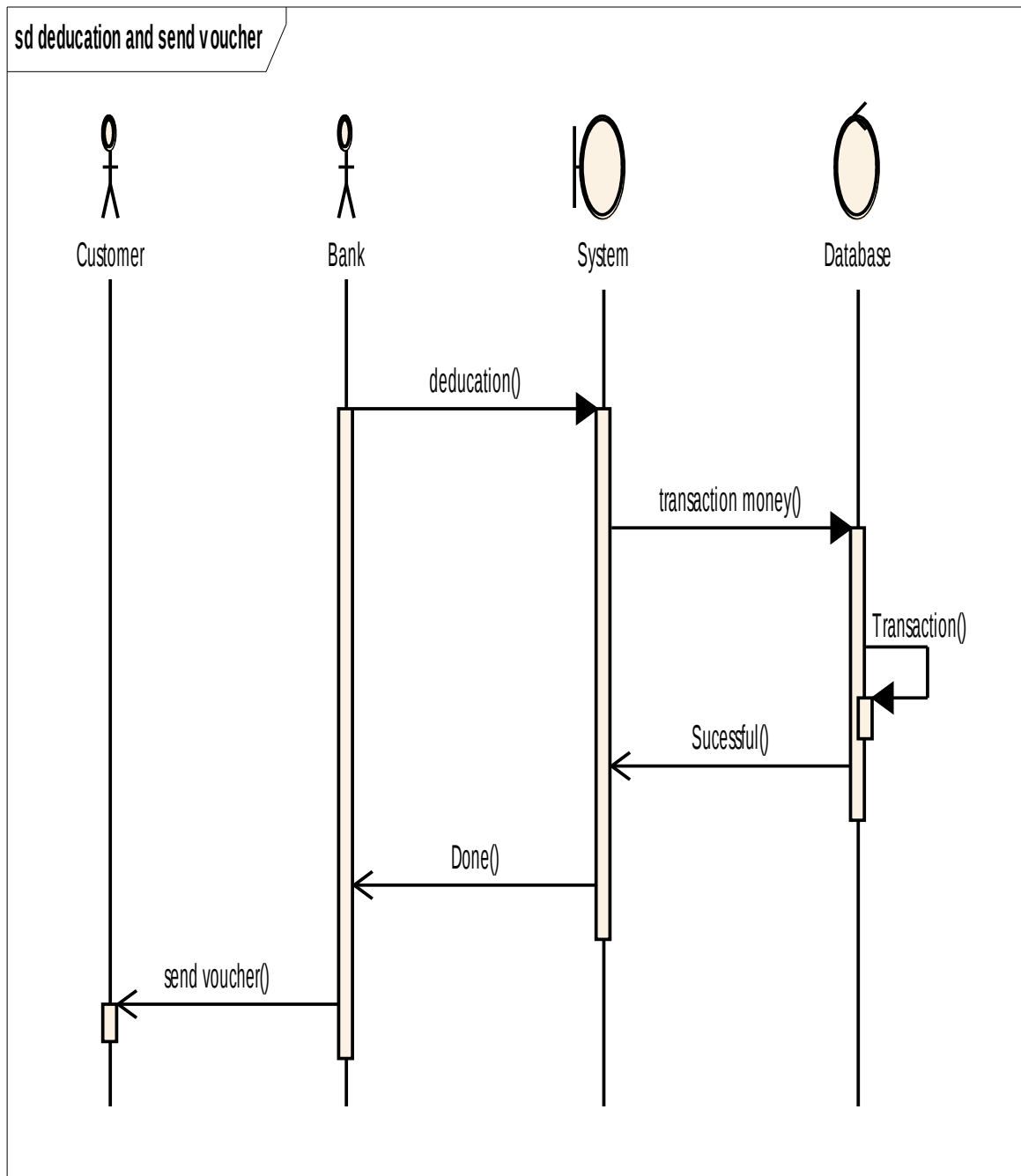


Figure (3.) Sequence Diagram for Deduction and send voucher

3.5.2.7 REPORT DIAGRAM:

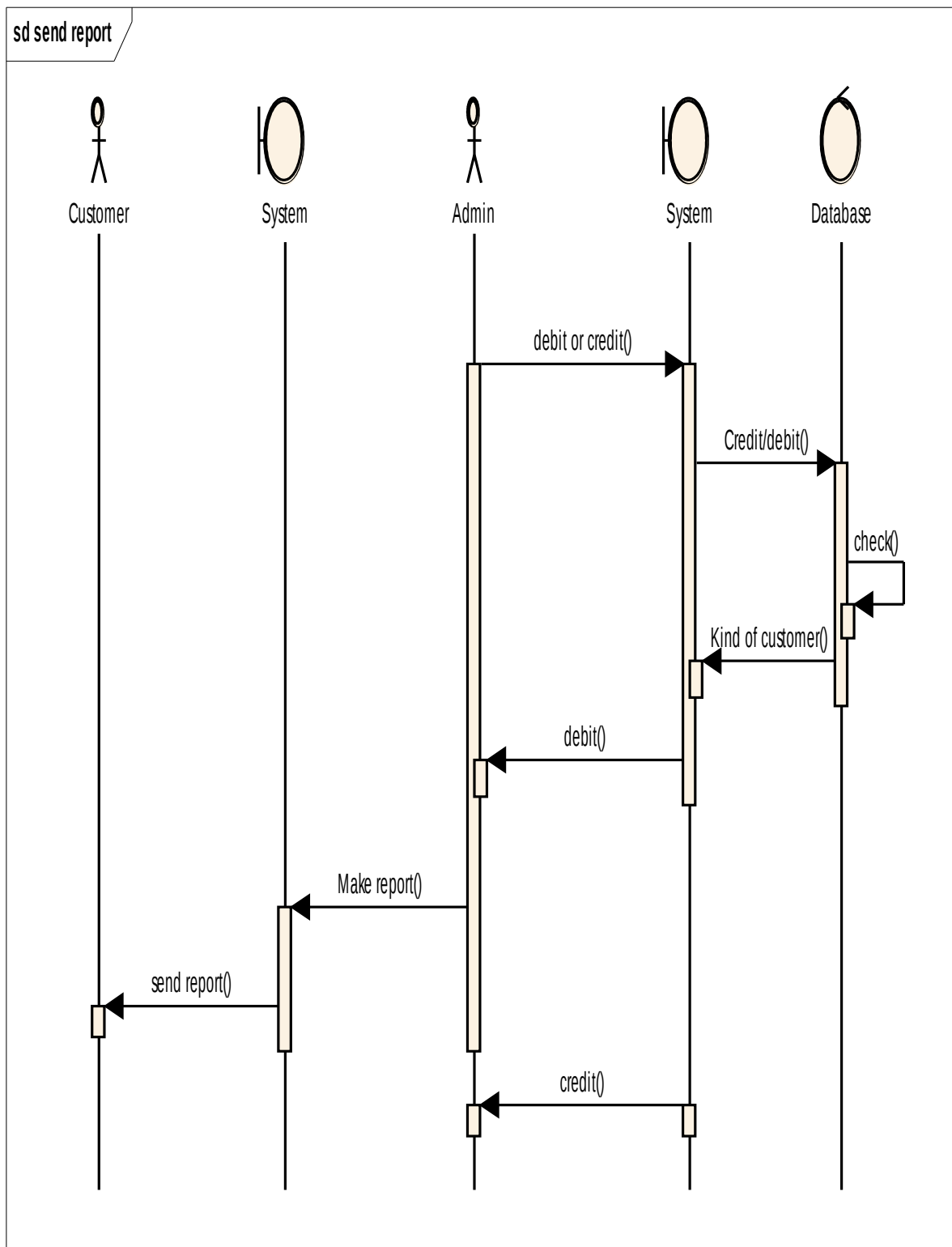


Figure (3.) Sequence Diagram for Report

3.5.3 ACTIVITY DIAGRAM

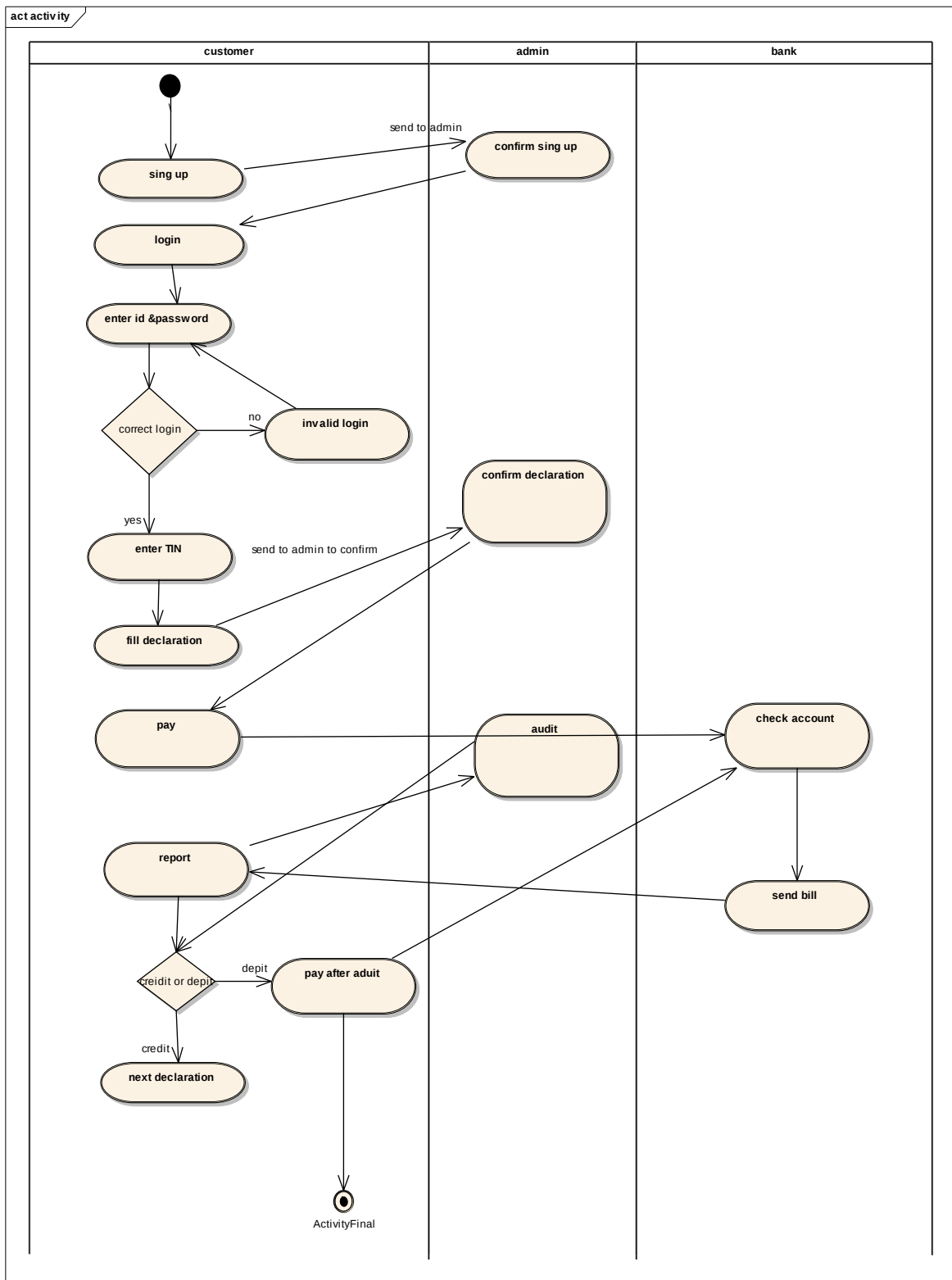


Figure (3.) Activity Diagram for System

CHAPTER FOUR IMPLEMENTATION

4.1 INTRODUCTION

This Chapter includes the proposed System interfaces.

4.2 HOW SYSTEM WORK

The Figure (4.1) show system processes and it divided into three levels: Admin who has privilege to confirm registration and confirm or modify the declaration, the taxpayer who pays the tax, and the bank which save the admin, user accounts, and the user paid through it.

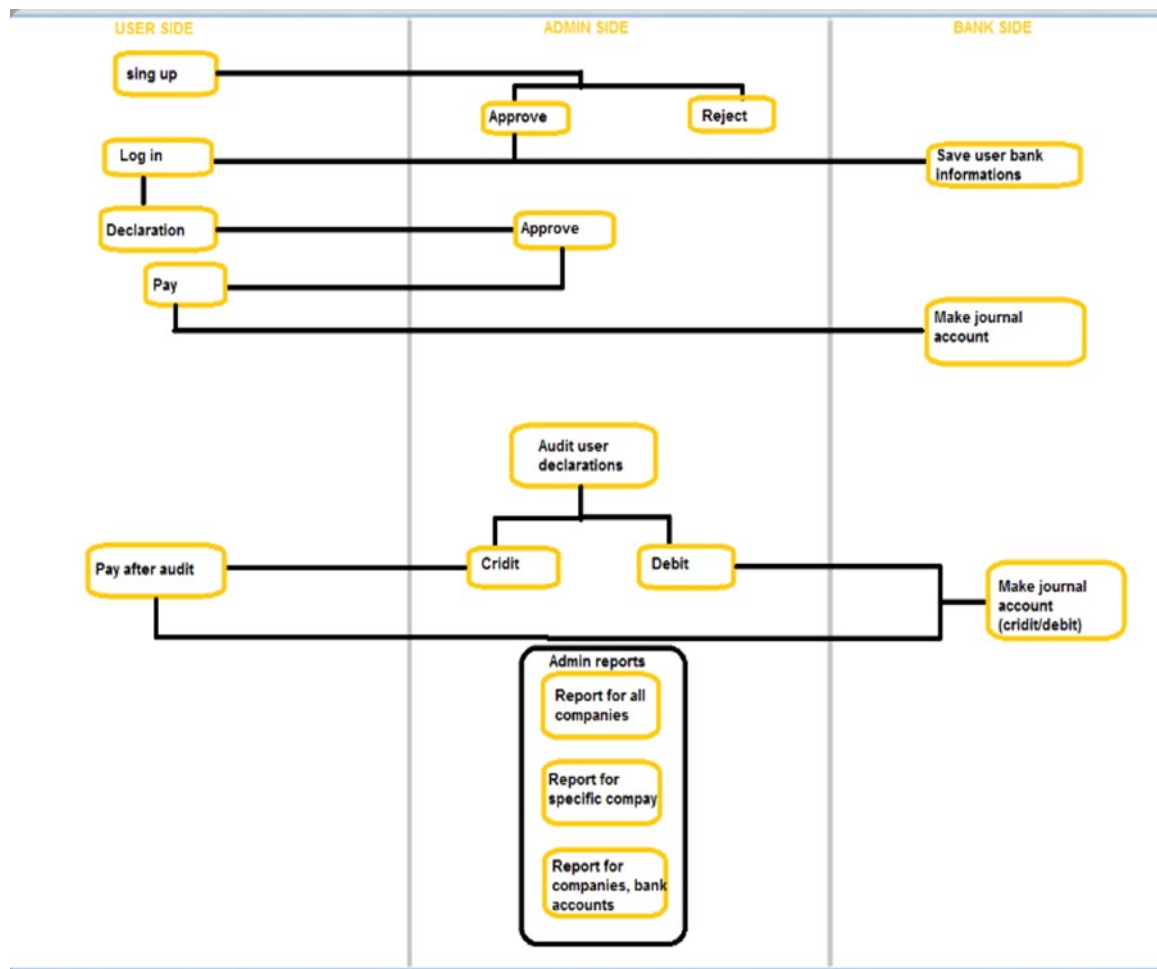
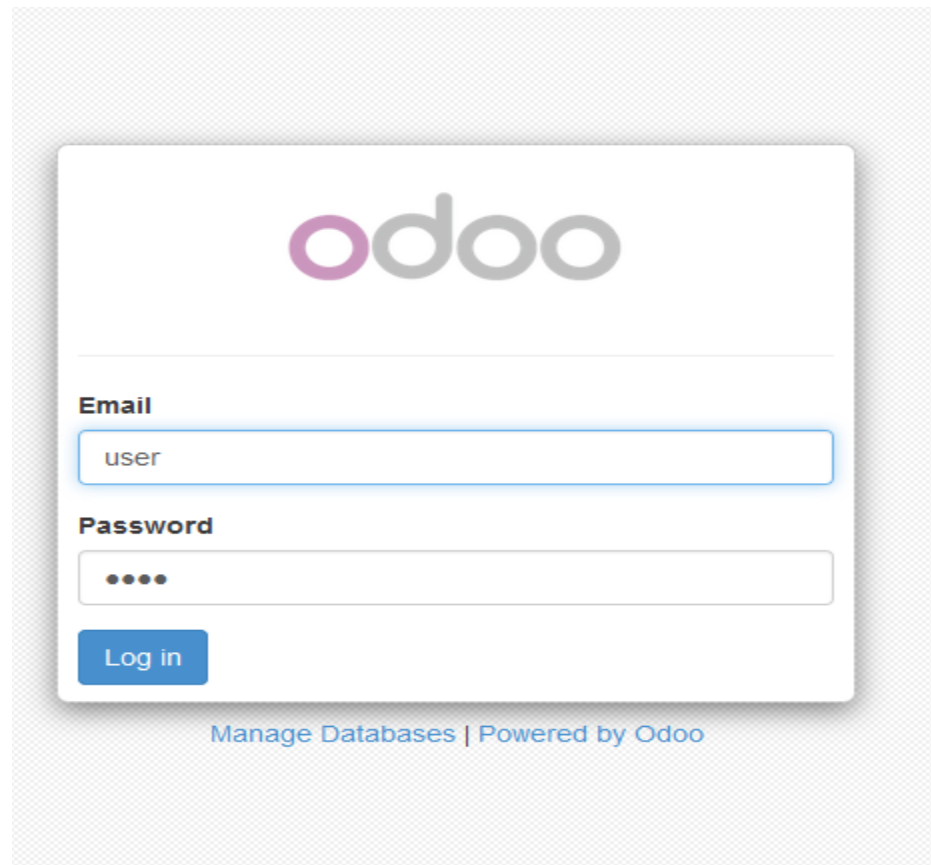


Figure (4.) How System Work

4.2.1 THE TAXPAYER PROCESSES

4.2.1.1 LOGIN TO THE SYSTEM



The image shows a login interface for a system powered by Odoo. At the top, the Odoo logo is displayed. Below it, there are two input fields: one for 'Email' containing the text 'user' and one for 'Password' with four dots representing masked characters. A blue 'Log in' button is positioned below the password field. At the bottom of the form, the text 'Manage Databases | Powered by Odoo' is visible.

Figure (4.)User Login Screen for System

4.2.1.2 SIGNUP TO THE SYSTEM

Taxpayer Signup to the system by giving his TIN, password, information about his work activity, and his bank account. There is validation on TIN, password, email, cell-phone, and phone in appendix A.

The screenshot shows a web interface for taxpayer registration. The main form is titled "المعلومات الاساسية" (Basic Information) and includes the following fields:

- رقم التعريف (Identification Number): 12345678
- كلمة السر (Password): masked with dots
- اسم المكلف (Taxpayer Name): mba company for software
- الاسم التجاري (Commercial Name): نيس سوفت وير
- طبيعة النشاط (Nature of Activity): مخفي (Hidden)
- الكيان القانوني (Legal Entity): شركة (Company)

Below the main form is a table for "المعلومات الشخصية" (Personal Information):

الولاية (Governorate)	المحل (Location)	المهنة (Profession)	الرقم القومي (National ID)	الاسم (Name)	الوحدة الادارية (Administrative Unit)	الجنس (Gender)	الرقم القومي (National ID)	الاسم (Name)	الوحدة الادارية (Administrative Unit)
الولاية	المحل	المهنة	الرقم القومي	الاسم	الوحدة الادارية	الجنس	الرقم القومي	الاسم	الوحدة الادارية
الحي	الثورة	الحارة	732	التاسمه	البرج	المينى	0969847720	21189	الجوال
السوق	امدرمان	الشرع	www.mba.com	الموردة	المكتب المختص	البريد الالكتروني	mba@hotmail.com	www.mba.com	www.mba.com

Figure (4.) Taxpayer Signup screen

Taxpayer fill in his bank account information to pay his tax within it in the pay process.



Figure (4.) Taxpayer create Bank Account Screen

Website الموارد البشرية التقارير الضرائب Messaging

جديد

حفظ أو تجاهل

العملاء

تسجيل الدخول

تسجيل دخول جديد

الاقرار

المراجعة

المراجعة

يعمل على Odoo

طلب تسجيل

طلب تسجيل موافقة مستند

المعلومات الاساسية

الرقم التعريفي	12345678	كلمة السر	••••
أسم المكلف	maha company for software	الاسم التجاري	مها سوفت وير
طبيعة النشاط	خدمي		
الكيان القانوني	شركة		

العنوان المعلومات الشخصية

الحساب الشخصي	n00 maha
حساب الضرائب	Bank (EUR)

Figure (4.) Screen Shows Taxpayer completes his information to the Signup process, and selects the tax chamber account.

Website الحاسبة الموارد البشرية التقارير الضرائب Message

nuha company for software

حفظ أو تجاهل

العملاء
تسجيل الدخول
تسجيل دخول جديد
الافرار
المراجعة
المراجعة

يصل على Odoo

طلب تسجيل موافقة مستند

المعلومات الأساسية

الرقم التعريفي 123456789
كلمة السر ●●●●

أسم المكلف nuha company for software
الاسم التجاري نيس سوفت وير

طبيعة النشاط محلي

الكيان القانوني شركة

العنوان المعلومات الشخصية

الولاية	الخطوط	المدينة	الوحدة الادارية	الجزيرة
الحي	الثورة	الحارة	المربع	1
السوق	المدرمان	الشرع	المنى	123
الطابق	الاول	الهاتف	الجوال	0989947720
الموقع الالكتروني	www.nuha.com	البريد الالكتروني	المكتب المخصص	nuha@hotmail.com

Figure (4.) Screens shows that taxpayer send information to admin of system to confirm it.

Website الموارد البشرية التقارير الضرائب المحاسبة Messaging

nuha company for software / طلب التسجيل

المزيد ▼ إنشاء تحرير

طلب تسجيل موافقة مستند دخول

المعلومات الأساسية

الرقم التعريفي	12345678	كلمة السر	****
أسم المكلف	nuha company for software	الاسم التجاري	نهي سوفت وير
طبيعة النشاط الكيان القانوني	خدمي شركة		

العنوان المعلومات الشخصية

الولاية	الخرطوم	المحلية	امدرمان	الوحدة الادارية	كروي
الحي	الثورة	الحارة	التاسعه	المرج	1
السوق	امدرمان	الشرع	الموردة	المبنى	732
الطابق	الاول	الهاتف	21189	الجوال	0969847720
الموقع الالكتروني	www.nuha.com	البريد الالكتروني	nuha@hotmail.com	المكتب المخصص	smatz

العلاء

تسجيل الدخول

تسجيل دخول جديد

الافرار

المراجعة

المراجعة

يعمل على Odo

Figure (4.) Screen shows that admin conformed, accepts the user request, and the Signup process completed.

4.2.1.3 LOGIN TO THE SYSTEM

Taxpayer Login to the system after the admin accepts his request by giving his TIN, and his password. There is validation on TIN, and password in appendix A.

The screenshot shows a web application interface for taxpayer login. At the top, there is a navigation bar with links for 'Website', 'المحاسبة' (Accounting), 'الضرائب' (Taxes), and 'Messaging'. Below this, the main content area is divided into a header and a main body. The header includes a 'دخول / جديد' (Login / New) link and a 'حفظ أو تجاهل' (Save or Ignore) button. The main body contains a login form with the following elements:

- A 'تسجيل' (Register) button on the left.
- A 'دخول' (Login) button on the right.
- A field for 'الرقم التعريفي' (TIN) with the value '12345678'.
- A field for 'كلمة السر' (Password) with masked characters '••••'.

On the right side, there is a sidebar with the 'odoo' logo and a list of user actions: 'العملاء' (Customers), 'تسجيل الدخول' (Login), 'تسجيل دخول جديد' (New Login), 'الاقرار' (Decisions), 'المراجعة' (Review), and 'المراجعة' (Review). At the bottom of the sidebar, it says 'يعمل على Odoo' (Working on Odoo).

Figure (4.) taxpayer login screen

4.2.1.4 FILLING THE DECLARATION PROCESS

Taxpayer filling declaration by the following information: date, his sales, purchases. The system automatically extract the VAT from each unit and then calculate the summation of all units that user provides. System shows the taxpayer his final balance that should paid.in Figure(4.8)

The screenshot shows the Odoo ERP interface for filling a VAT declaration. The form is in Arabic and includes the following fields and data:

- تاريخ الأقرار** (Declaration Date): 06/08/2016
- الرقم التعريفي** (Identification Number): 12345678
- اسم الشركة** (Company Name): mha company for software
- الاسم التجاري** (Trade Name): نهج سوفت وير

The table below shows the recorded sales and purchases:

المبيعات	المشتريات	الرصيد
السلع والخدمات الخاضعة	200.00	34.00
الاتصالات	0.00	0.00
الأصول الثابتة الخاضعة	10.00	1.70
السلع والخدمات الخاضعة الخاصة	0.00	
السلع والخدمات المعفاة	20.00	
سلع وخدمات الصادر	0.00	
الإجمالي	55.70	

Figure (4.) taxpayer filling his sales

Home الضرائب المحاسبة الموارد البشرية التقارير White Messaging

دخول / False / جديد حفظ رؤية ارسال

تم موافقة مسند

التاريخ الاقرار: 06/08/2016
 الرقم التعريفي: 12345678
 اسم الشركة: misa company for software
 الاسم التجاري: نهى سوفت وير

المبيعات المشتريات الرصيد

المشتريات الخاضعة

51.00	17%	300.00	المبيعات
0.00	17%	0.00	المحلية
0.00	17%	200.00	الاصول الثابتة
		0.00	السلع والخدمات والاعمال الخاضعة الخاصة

الخدمات والمصروفات الخاضعة

0.00	30%	0.00	الاتصالات
0.00	17%	0.00	اخرى
		0.00	المستوردة المغفلة
		0.00	المحلية المغفلة
		51.00	اجمالي الضريبة المدفوعة عن الشهر

يعمل على Odoo

Figure (4.) Screen shows the taxpayer filling his purchases

Website الموارد البشرية المحاسبة الضرائب Messaging

دخول / False / جديد

حفظ أو تجاهل

العملاء

تسجيل الدخول

تسجيل دخول جديد

الأقارب

المراجعة

المراجعة

يعمل على Odoo

تم سداد موافقة مستند

ارسال

تاريخ الاقرار 06/08/2016

الرقم التعريفي 12345678

اسم الشركة muha company for software

الاسم التجاري نهى سوفت وير

المبيعات المشتريات الرصيد

الرصيد

رصيد الضريبة الدائن المرحل	29.30	رصيد الضريبة المرحل عن الشهر السابق	0.00
الاسترداد	0.00	رصيد الضريبة المدين الواجب السداد	0.00
		شهادات شركات البترول	0.00

Figure (4.) Shows the finally tax balance that the taxpayer should pay.

The taxpayer sends his declaration to admin of the system to confirm it

Website | الضرائب | المحاسبة | الموارد البشرية | التقارير | Taxuser | Messaging

nuha company for software / False / دخول | حفظ | أو تجاهل

الملاء | تسجيل الدخول | تسجيل دخول جديد | الاقرار | المراجعة | المراجعة

المستند | ارسال للضرائب | موافقة | سداد | تم

06/08/2016	تاريخ الاقرار
12345678	الرقم التعريفي
نهي سوفت وير	الاسم التجاري
nuha company for software	اسم الشركة

المبيعات | المشتريات | الرصيد

الرصيد

29.30	رصيد الضريبة الدائن المرسل	0.00	رصيد الضريبة المرسل عن الشهر السابق
0.00	الاسترداد	0.00	رصيد الضريبة المدين الواجب السداد
		0.00	شهادات شركات البترول

يعمل على Odoo

Figure (4.) Shows taxpayer sends declaration to the taxation chamber to confirm it.

Website التقارير الموارد البشرية المحاسبة الضرائب Messaging

nuha company for software / الاقارارات

العملاء
تسجيل الدخول
تسجيل دخول جديد
الاقارارات
المراجعة
المراجعة

يعدل على Odo

المبيعات	المشتريات	الرصيد	الاسم التجاري	تاريخ الاقرار
34.00	17%	200.00	نهي سوفت وير	06/08/2016
0.00	30%	0.00		12345678
1.70	17%	10.00	nuha company for software	
0.00		0.00		
20.00				
0.00				
55.70				

السلع والخدمات والاعمال الخاضعة
الاتصالات
الاصول الثابتة الخاضعة
السلع والخدمات والاعمال الخاضعة الخاصة
السلع والخدمات المعفاة
سلع وخدمات الصادر
الاجمالي

Figure (4.) taxpayer pay tax

Website الموارد البشرية التقارير المحاسبة الضرائب Messaging

audit.tax,14 / audit

حفظ أو تجاهل

العملاء

تسجيل الدخول

تسجيل دخول جديد

الأقارب

المراجعة

المراجعة

يعمل على Odoo

تم سداد تم

مستند إرسال سداد بعد المراجعة تم

من	06/01/2016	الى	08/08/2016
اسم الشركة	miba company for software		
الرقم التعريفي	12345678	الاسم التجاري	نهي سوفت وير
نوع الاصيد	دائن	قيمة المراجعة	1200.00
الرصيد الدائن	1000.00		

Figure (4.) taxpayer receive the audit balance from admin screen

Website التقارير المحاسبة الضرائب Messaging

audit.tax,10 / audit

العملاء

تسجيل الدخول

تسجيل دخول جديد

الأقارب

المراجعة

المراجعة

يعمل على Odoo

المزيد

إنشاء

تحرير

تم

تم

مستند

إرسال

مساعد بعد المراجعة

08/12/2016	الى	06/01/2016	من
		naha company for software	اسم الشركة
نهى سوفت وير	الاسم التجاري	12345678	الرقم التعريفي
		دائن	نوع الرصيد
		120.00	قيمة المراجعة

Figure (4.) Taxpayer pay after audit Screen.

Website التقارير المحاسبة الضرائب Messaging

audit.tax,10 / audit

المزيد إنشاء تحرير

الملاء

تسجيل الدخول
تسجيل دخول جديد
الاقرار

المراجعة

المراجعة

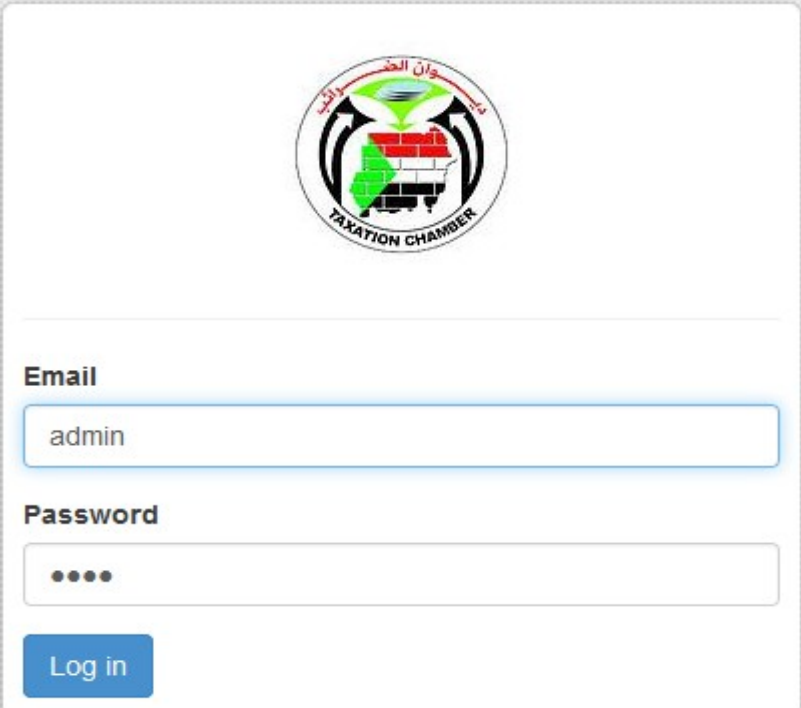
يعمل على Odoo

تم	سداد بعد المراجعة	ارسل	مستند
من	06/01/2016	الى	08/12/2016
اسم الشركة	nuba company for software	الاسم التجاري	نهى سوفت وير
الرقم التعريفي	12345678	نوع الرصيد	دائن
قيمة المراجعة	120.00		

Figure (4.) Shows the balance is due from the taxpayer account and the audit process is done.

4.2.2 THE ADMINISTRATOR PROCESSES

4.2.2.1 LOGIN TO THE SYSTEM



The image shows a login interface for a system. At the top center is a circular logo for the 'TAXATION CHAMBER' with Arabic text 'دائرة الضرائب' and 'TAXATION CHAMBER' around it. Below the logo is a horizontal line. Underneath, there are two input fields: 'Email' with the text 'admin' and 'Password' with four dots. A blue 'Log in' button is positioned below the password field. At the bottom of the form area, the text 'Manage Databases | Powered by Odoo' is displayed.

Figure (4.) Admin Login Screen for System

admin | الإعدادات | Website | التقارير | التسويق | الموارد البشرية | المحاسبة | الضرائب | Messaging

طلب التسجيل

إشياء أو استيراد

أسم المكلف

nuta company for software	<input type="checkbox"/>
shima company for travelling	<input type="checkbox"/>
rohda cars company	<input type="checkbox"/>

العملاء

تسجيل دخول جديد

الأقارب

المراجعة

المراجعة

التقارير

تقرير لشركة معينة

كل الأقرارات

تقرير البنوك

of 3 1-3

المراد

Figure (4.) shows the list of companies that admin should confirm or reject their requests.

4.2.2.2 CONFIRM OR REJECT THE TAXPAYER REQUEST FOR REGISTRATION.

admin | الإعدادات | Website | التقارير | الموارد البشرية | التصديق | المحاسبة | الضرائب | Messaging

طلب التسجيل / naha company for software

المزيد | إنشاء | تحرير

طلب تسجيل | موافقة | مستند | رفض | استلام

العلاء

تسجيل دخول جديد

الأقرار

المراجعة

المراجعة

التقارير

تقرير لشركة معينة

كل الأقرارات

تقرير البنوك

المعلومات الأساسية

الرقم التعريفي	12345678	كلمة السر	****
أسم المكلف	naha company for software	الاسم التجاري	نهي سوفت وير
طبيعة النشاط	خدمي		
الكيان القانوني	شركة		

العنوان | المعلومات الشخصية

الولاية	الخرطوم	المحلية	امدرمان	الوحدة الادارية	كروي
الحي	الثورة	الحارة	التاسعه	المرجع	1
السوق	امدرمان	الشرع	الموردة	المنبي	732
الطابق	الاول	الهاتف	21189	الجوال	0969847720
الموقع الالكتروني	www.naha.com	البريد الالكتروني	naha@hotmail.com	المكتب المختص	smntz

Figure (4.) Screen Shows admin confirm or reject the user request registration.

admin | Website الإعدادات | الحاسبة | التسويق | الموارد البشرية | التقارير | الضرائب | Messaging

طلب التسجيل / نهله للاجهزة الالكترونية

14 / 14 | المزيد | إنشاء | تحرير

مرفوض | طلب تسجيل | موافقة | مستند

المعلومات الاساسية

الرقم التعريفي	95162384	كلمة السر	****
أسم المكتب	نهله للاجهزة الالكترونية	الاسم التجاري	نهله الكترونك
طبيعة النشاط	خدمي		
الكيان القانوني	شركة		

العنوان | المعلومات الشخصية

الولاية	الخرطوم	المحلية	امدرمان	الوحدة الادارية	كروي
الحي	الثورة	الحارة	الرابعة	المرجع	19
السوق	امدرمان	الشرع	المعونة	المنبي	951
الطابق	الرابع	الهاتف	753428	الجوال	0914955293
الموقع الالكتروني	www.nhla.com	البريد الالكتروني	nhla@hotmail.com	المكتب المختص	nhla

العلاء

تسجيل دخول جديد

الاقرار

المراجعة

المراجعة

التقارير

تقرير لشركة معينة

كل الاقارار

تقرير البنوك

Figure (4.) Screen Shows admin reject the user request for registration.

admin Website إعدادات المحاسبة التسويق الموارد البشرية التقارير Messaging الضرائب

طلب التسجيل / nuha company for software

17/17 الفريد إنشاء تحرير

طلب تسجيل موافقة مستند

المعلمة

تسجيل دخول جديد

الأقراء

المراجعة

المراجعة

التقارير

تقرير لشركة معينة

كل الأقرارات

تقرير البنوك

المعلومات الأساسية

الرقم التعريفي	22222222	كلمة السر	****
أسم المكلف	nuha company for software	الاسم التجاري	نهي سوفت وير
طبيعة النشاط	خدمي		
الكيان القانوني	شركة		

العنوان المعلومات الشخصية

الولاية	الخرطوم	المحلية	امدرمان	الوحدة الادارية	كردى
الحي	الثورة	الحارة	التاسعة	المرج	1
السوق	امدرمان	الشرع	الموردة	المبنى	732
الطابق	الاول	الهاتف	21189	الجوال	0969947720
الموقع الالكتروني	www.nuha.com	البريد الالكتروني	nuha@hotmail.com	المكتب المختص	smtz

Figure (4.) Screen Shows admin accept the user request for registration.

admin Website إعدادات المحاسبة التسويق الموارد البشرية التقارير الضرائب Messaging

الاقارات / nuha company for software

المزيد طباعة تحرير

تم موافقة سداد موافقة ارسال للضرائب مستند موافقة

العلاء
تسجيل دخول جديد
الاقارات
المراجعة
المراجعة
التقارير
تقرير لشركة معينة
كل الاقارات
تقرير البنوك

06/08/2016	تاريخ الاقرار		
12345678	الرقم التعريفي		
نهن سوفت وير	اسم الشركة		
nuha company for software	اسم التجاري		
	المبيعات		
	المشتريات		
	الرصيد		
34.00	17%	200.00	السلع والخدمات والاعمال الخاضعة
0.00	30%	0.00	الاتصالات
1.70	17%	10.00	الاصول الثابتة الخاضعة
		0.00	السلع والخدمات والاعمال الخاضعة الخاصة
		20.00	السلع والخدمات المعفاة
		0.00	سلع وخدمات الصادر
		55.70	الاجمالي

Figure (4.) admin confirm the declaration screen

4.2.2.4 AUDIT PROCESS

This process completing by the admin after three months since the declaration has been provided. Admin select time period and company to be audited; then company's declarations will appear and he can reviewed them again, and write a new balance that taxpayer should pay.

admin

الإعدادات Website التقارير الموارد البشرية التصويت المحاسبة الضرائب Messaging

audit / جديد

حفظ أو تجاهل

إرسال

تم سداد بعد المراجعة

مستند إرسال

من 06/01/2016 إلى 08/12/2016

اسم الشركة muha company for software

الرقم التعريفي 12345678 الاسم التجاري لئى سوفت وير

الأقرارات

تاريخ الأقرار	رصيد الضريبة المدائن المرحل	رصيد الضريبة المدين الواجب السداد
06/08/2016	29.30	0.00
08/02/2016	0.00	15.10
07/11/2016	0.00	17.50

إضافة عنصر

نوع الرصيد دائن مدين

قيمة المراجعة 120.00

الملاء

تسجيل دخول جديد

الأقرار

المراجعة

المراجعة

التقارير

تقرير لشركة معينة

كل الأقرارات

تقرير البنوك

Figure (4.) audit process screen

4.2.2.5 REPORTS

1- Report for the specific company, select the company name and period time. There is validation on date_from, and date_to in appendix A.

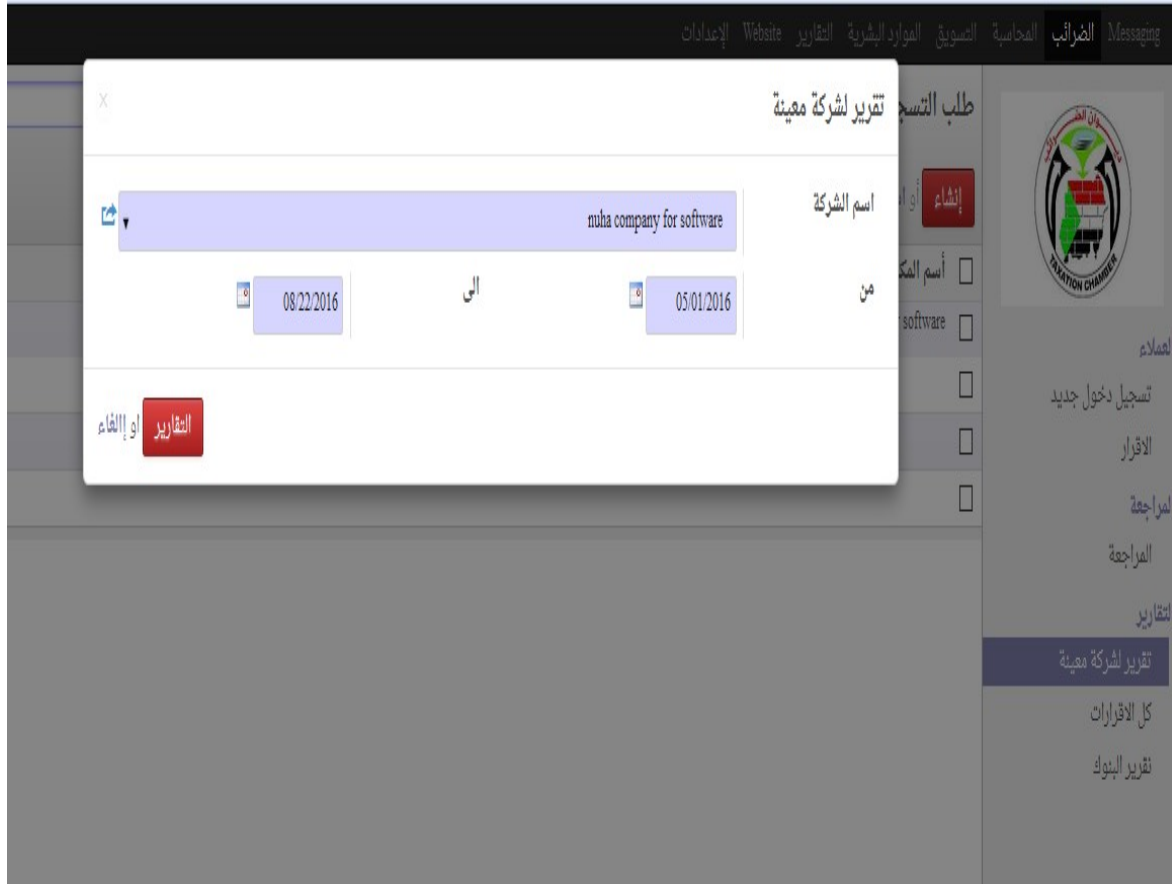


Figure (4.) report for Specific Company.

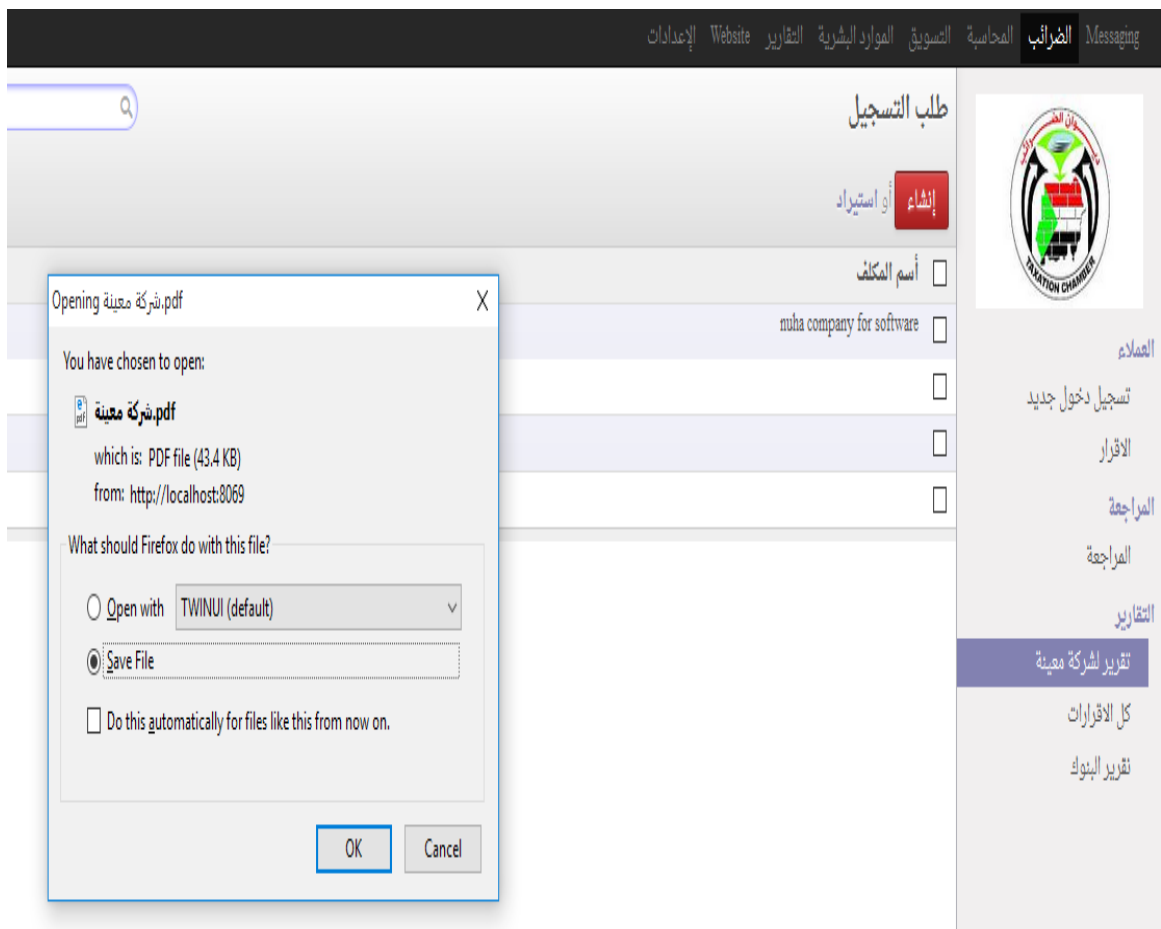


Figure (4.) print the report.



ديوان الضرائب
1725 Slough Ave.
Scranton 18540

الهاتف : +1 8069 123 555
البريد الإلكتروني : info@yourcompany.example.com
الموقع الإلكتروني : http://www.example.com

جمهورية السودان

ديوان الضرائب

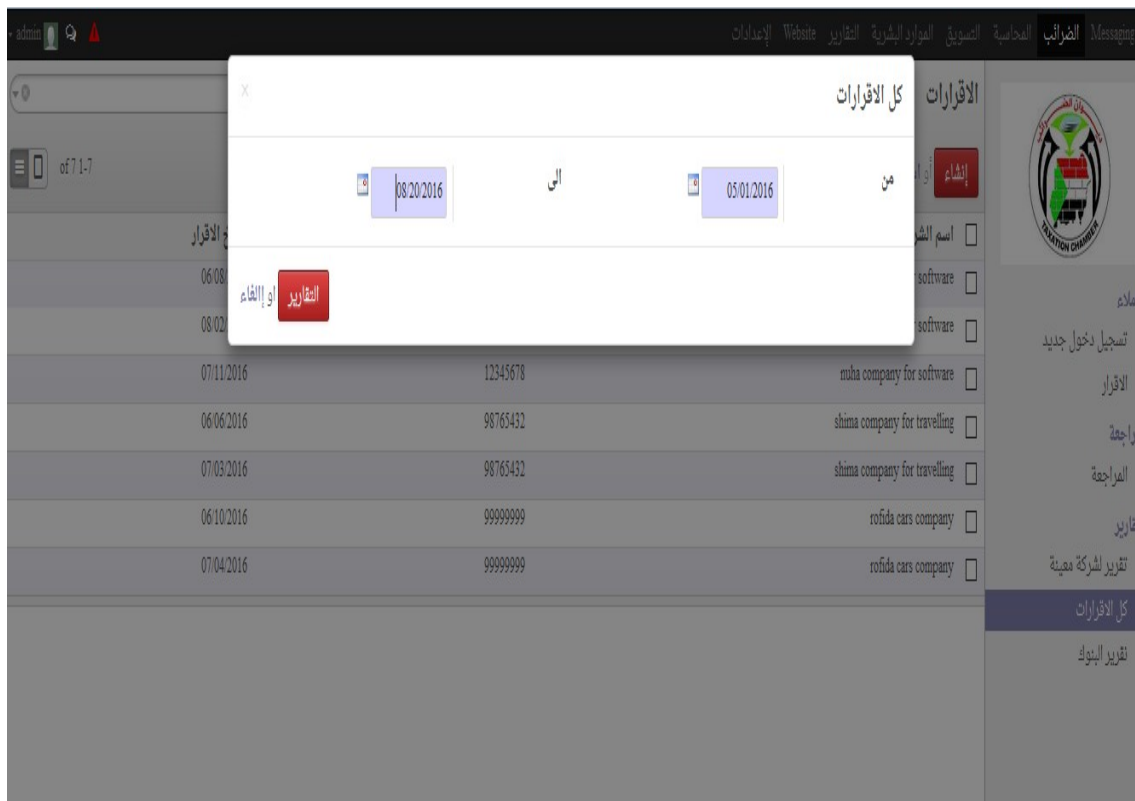
nuha company for software

التاريخ	اجملي المبيعات	اجملي المشتريات	الرصيد المرحل من الشهر السابق	الرصيد الدائن	الرصيد الاذن
2016-06-08	55.7	85.0	0.0	29.3	0.0
2016-08-02	52.5	37.4	29.3	0.0	15.1
2016-07-11	77.0	59.5	29.3	0.0	17.5

Figure (4.) Report for Nuha Company.

2- Report for all declarations

Select the period time to Show the declarations on it.



The screenshot displays a web application interface with a modal window for selecting a date range. The modal window is titled "كل الاقرارات" (All Declarations) and contains a date range selector with "من" (From) and "الى" (To) labels. The selected dates are 08/20/2016 and 05/01/2016. Below the date range, there is a red button labeled "التقرير أو إلغاء" (Report or Cancel). The background shows a table of declarations with columns for date, ID, and company name. The table is partially obscured by the modal window.

الاقرار	التاريخ	رقم الاقرار	اسم الشركة
06/08/2016	12345678	muka company for software	
08/02/2016	98765432	shima company for travelling	
07/11/2016	98765432	shima company for travelling	
06/06/2016	99999999	rofida cars company	
07/03/2016	99999999	rofida cars company	
06/10/2016			
07/04/2016			

Figure (4.) Report for all companies.

3- Report for all declaration

2016-10-21 08:48

ديوان الضرائب

1 / 2



ديوان الضرائب
1725 Slough Ave.
Scranton 18540

الهاتف : +1 609 123 555
البريد الإلكتروني : info@yourcompany.example.com
الموقع الإلكتروني : http://www.example.com

جمهورية السودان

ديوان الضرائب

تقرير الأقرارات الشهرية

التاريخ	اسم الشركة	الاسم التجاري	اجملي المبيعات	اجملي المشتريات	الرصيد المرسل من الشهر السابق	الرصيد الدائن	الرصيد الاذن
2016-06-08	nuha company for software	نهي سوفت وير	55.7	85.0	0.0	29.3	0.0
2016-08-02	nuha company for software	نهي سوفت وير	52.5	37.4	29.3	0.0	15.1
2016-07-11	nuha company for software	نهي سوفت وير	77.0	59.5	29.3	0.0	17.5
2016-06-06	shima company for travelling	shmoo	240.4	293.5	0.0	53.1	0.0
2016-07-03	shima company for travelling	shmoo	119.0	318.7	53.1	199.7	0.0
2016-06-10	rofida cars company	rfoo car	263.5	71.0	0.0	0.0	192.5
2016-07-04	rofida cars company	rfoo car	69.3	285.0	0.0	215.7	0.0

Figure (4.) Shows Report for all companies' declaration.

4- Report for bank: Admin Enter :chart of account, target moves, start and end period, the account of taxation chamber, the date from May to august

يومية طباعة حساب

شجرة الحساب: حسابات العملاء ca

السنة المالية: Fiscal Year X 2016

قيود يومية مصنفه حسب: تاريخ

كل القيود

تحركات الهدف مع العملة

فترات

بداية الفترة: X 03/2016

نهاية الفترة: X 08/2016

اليوميات

رمز	اسم اليومية	نوع	مستخدم
BNK2	Bank	البنك والشيكات	Administrator

إضافة عنصر

طباعة or إلغاء

Figure (4.) Report for bank

يومية

Chart of Accounts:
حسابات العملاء

Fiscal Year:
Fiscal Year X 2016

Journal:
Bank

Period:
X 06/2016

Entries Sorted By:
تاريخ

Target Moves:
كل القود

نقل	تاريخ	حساب	شريك	تسمية	مدين	دائن	
*34	06/06/2016	sh10	res.partner()	shima company for travelling	53.10 €	0.00 €	
*30	06/08/2016	n00	res.partner()	nuha company for software	29.30 €	0.00 €	
*36	06/10/2016	rf00	res.partner()	rofida cars company	0.00 €	192.50 €	
					الإجمالي	82.40 €	192.50 €

Figure (4.) shows the total balance of June month

يومية

Chart of Accounts:
حسابات العملاء

Fiscal Year:
Fiscal Year X 2016

Journal:
Bank

Period:
X 07/2016

Entries Sorted By:
تاريخ

Target Moves:
كل القيود

نقل	تاريخ	حساب	شريك	تسمية	مدين	دانن
*35	07/03/2016	sh10	res.partner()	shima company for travelling	199.70 €	0.00 €
*37	07/04/2016	rf00	res.partner()	rofida cars company	215.70 €	0.00 €
*32	07/11/2016	n00	res.partner()	nuha company for software	0.00 €	17.50 €
					الإجمالي	415.40 €
						17.50 €

Figure (4.) shows the total balance of July month

يومية

Chart of Accounts:
حسابات العملاء

Fiscal Year:
Fiscal Year X 2016

Journal:
Bank

Period:
X 08/2016

Entries Sorted By:
تاريخ

Target Moves:
كل القيود

نقل	تاريخ	حساب	شريك	تسمية	مدين	دائن
*31	08/02/2016	n00	res.partner()	nuha company for software	0.00 €	15.10 €
*10	08/03/2016	na1000	res.partner()	شركة نهى للبرمجيات	8.40 €	0.00 €
الإجمالي					8.40 €	15.10 €

Figure (4.) shows the total balance of August month

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 INTRODUCTION

This chapter discusses final results of the System.

5.2 RESULTS

The system applied in the taxation chamber real time and we found these results:

1. Reduce the administrative cost because it is preserved to the taxation chamber a large administrative burden.
2. Data will be reserved and it can be retrieved easily and conveniently at any time.
3. The system opening a new channel for interaction between the taxpayer and the tax chamber.
4. Reduce the cost of the taxpayers.^[13]
5. Save the time of the taxpayers and the taxation chamber employees.
6. Reduce the fines and irregularities.
7. The bonding process between the VAT processes becomes electronic.

CHAPTER SIX RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

This chapter contains the recommendations and conclusion.

6.2 RECOMMENDATIONS

- Link the system with alert system that alerts the taxpayers by messages or other techniques to submit the declaration in the specific time.
- Link the system with mobile application system so that the taxpayers access the system by this application.
- Add risk analysis functionality to the system to facilitate the audit process so that gives priority to those who will be audited and who deserves the audit, for the example, a taxpayer who always provides false information he will placing in the highest priority for audit list.
- Add attachment functionality to increase credibility to the declaration.
- Provide API to integrate the VAT system with other systems such as Customs System.

6.3 CONCLUSION

A system has been developed to ease the value-added tax processes (filing the declaration, pay the tax) by using an odoo system. The main idea in this research is solving the problem of the necessity of going to the tax chamber at specific period of time of the month to submit the processes of VAT. The system has been done to register the taxpayers, let them filling the declaration electronically, show them the amount of money that they must pay, and let them pay from their bank account.

The study applied in the taxation chamber and find out these results: reduce administrative cost, easily saving and retrieving data, reducing the cost of the taxpayer, reduce mulcts, opening a new channel between the taxpayers and the tax chamber.

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<http://openerp-development.blogspot.com15/9/2016> 6:23PM.
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- [13] http://s3.amazonaws.com/academia.edu.documents/38742483/Automation_of_Electronics_TAX_and_VAT_Collection.pdf
17/7/2016 1:00PM
- [14] http://www.uonbi.ac.ke/conferences/aibuma/journal/Paper4_Electronic_Tax_Registers.pdf 12/6/2016 2:00PM
- [15] <http://www.bu.edu/law/workingpapers-archive/documents/ainsworthr091610.pdf> 13/6/2016 3:40PM
- [16] <http://www.iiste.org/Journals/index.php/RJFA/article/view/24327/24898> 13/6/2016 4:50PM
- [17] http://www.ijssse.org/articles/ijssse_v1_i5_257_270.pdf
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- [19] <https://www.smartdraw.com/uml-diagram> 13/8/2016 5:21pm
- [21] <http://www.adelamer.com/vb/showthread.php?5268-%E3%DD%E5%E6%E3-%C7%E1%E4%D9%C7%E3-%C7%E1%D6%D1%ED%C8%C9> 15/9/2016 3:21pm
- [22] <http://moj.gov.sd/content/lawsv4/10/9.htm> 20/8/2016 8:21pm

APPENDIX

APPENDIX A

System validation

- **Validations for Registration.**

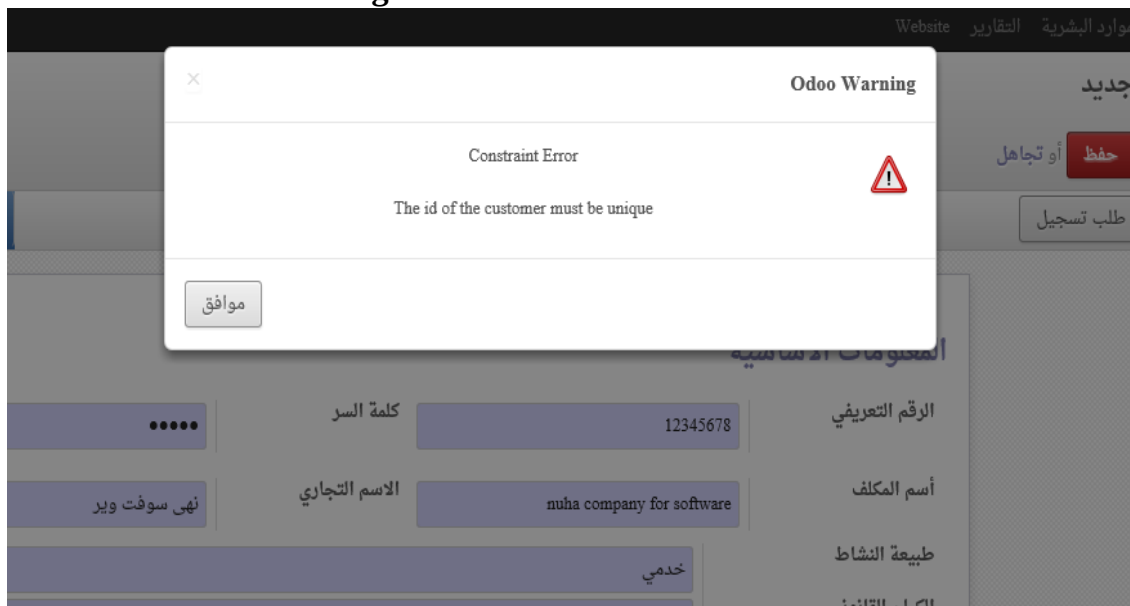


Figure (A.) Validation of id (must be unique)

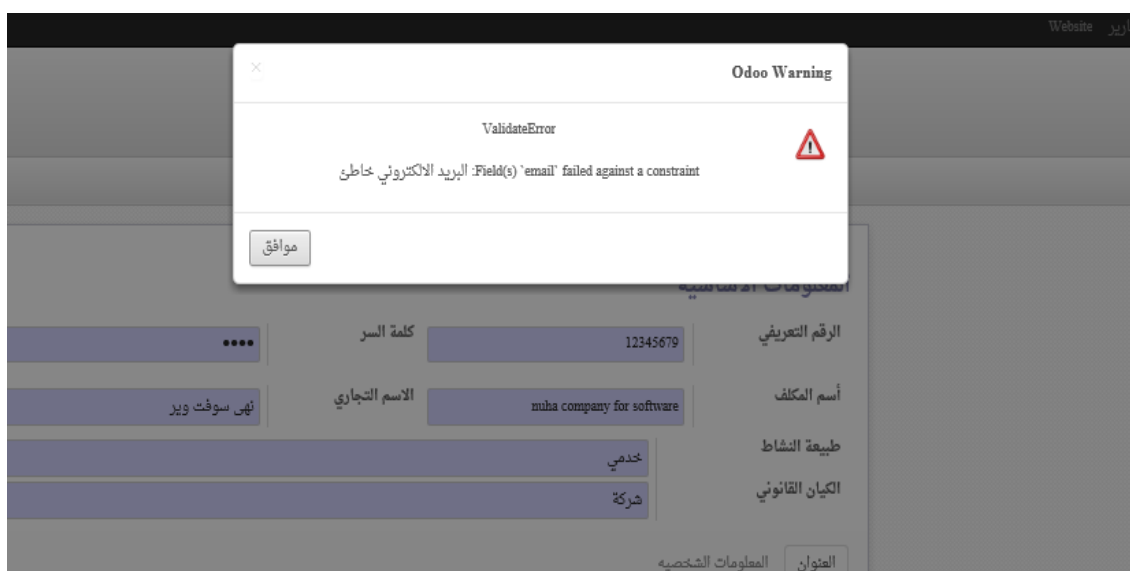


Figure (A.) Validation of email

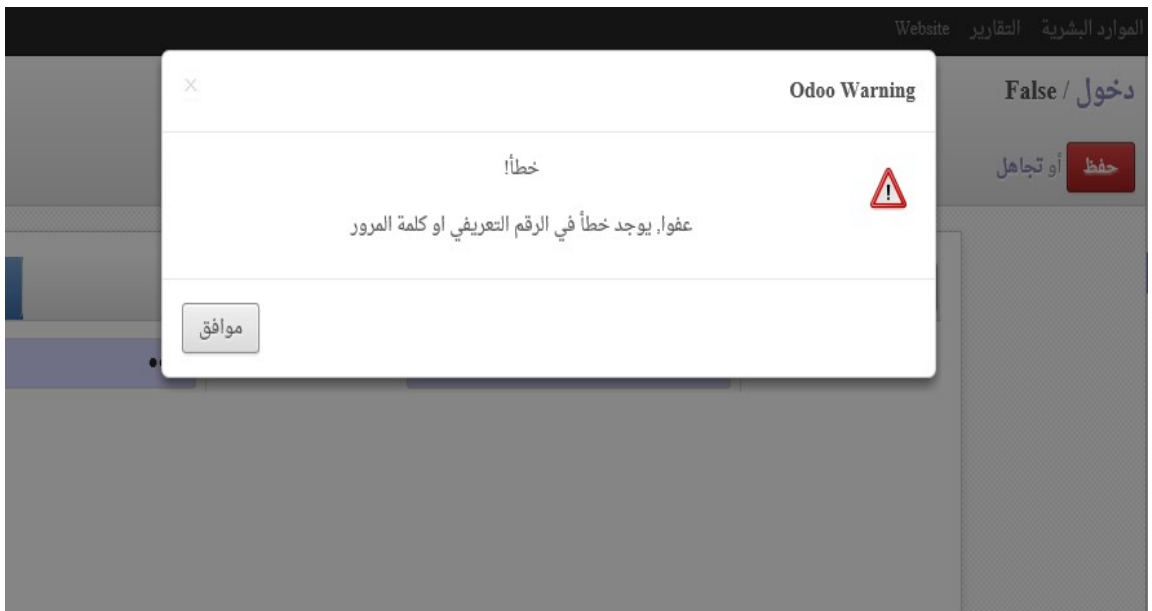


Figure (A.) Validation of login

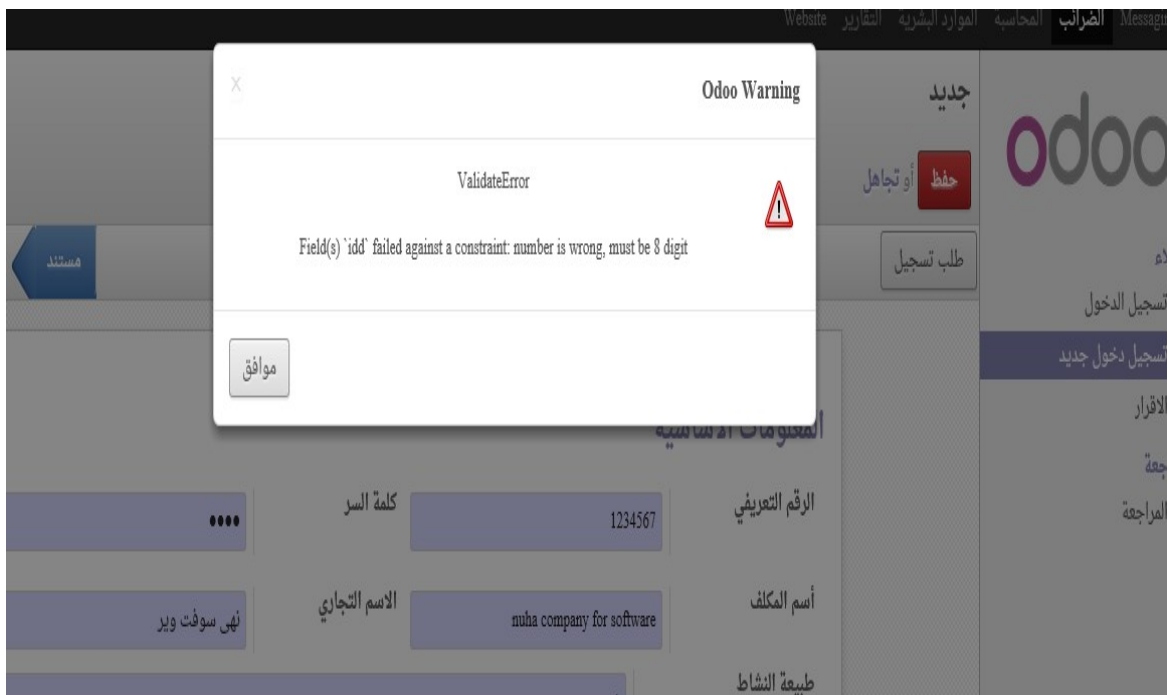
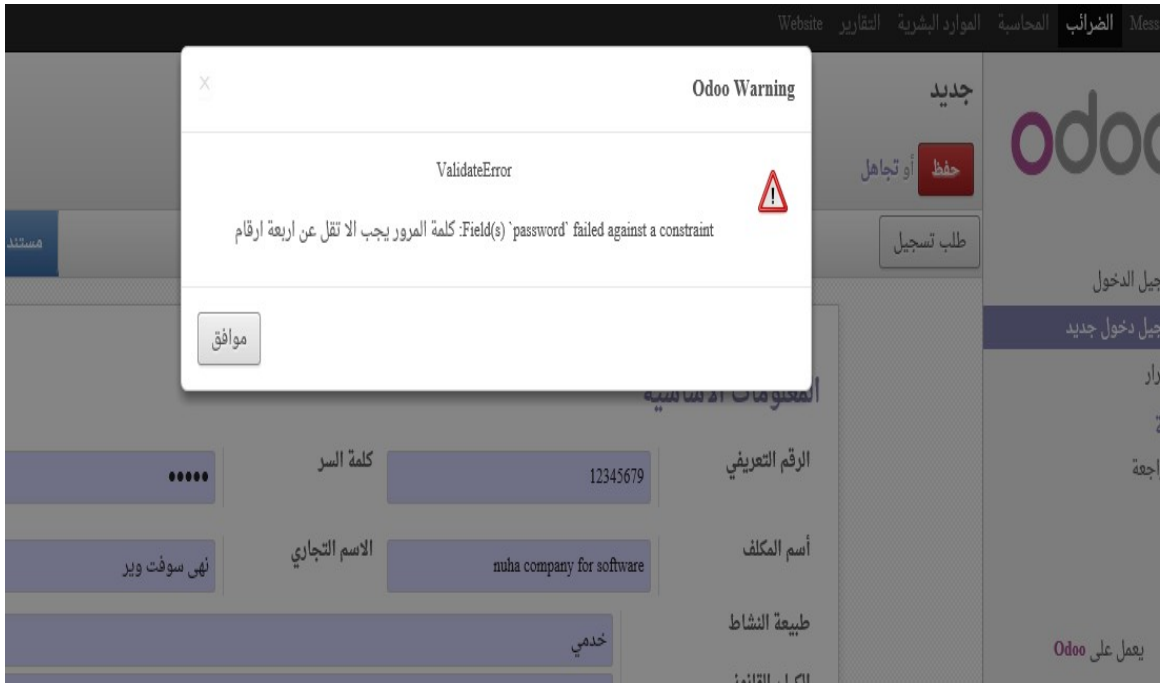


Figure (A.) id validation (must be 8 digits)



Figure[A.] Figure (A.) password validation (must be four numbers)

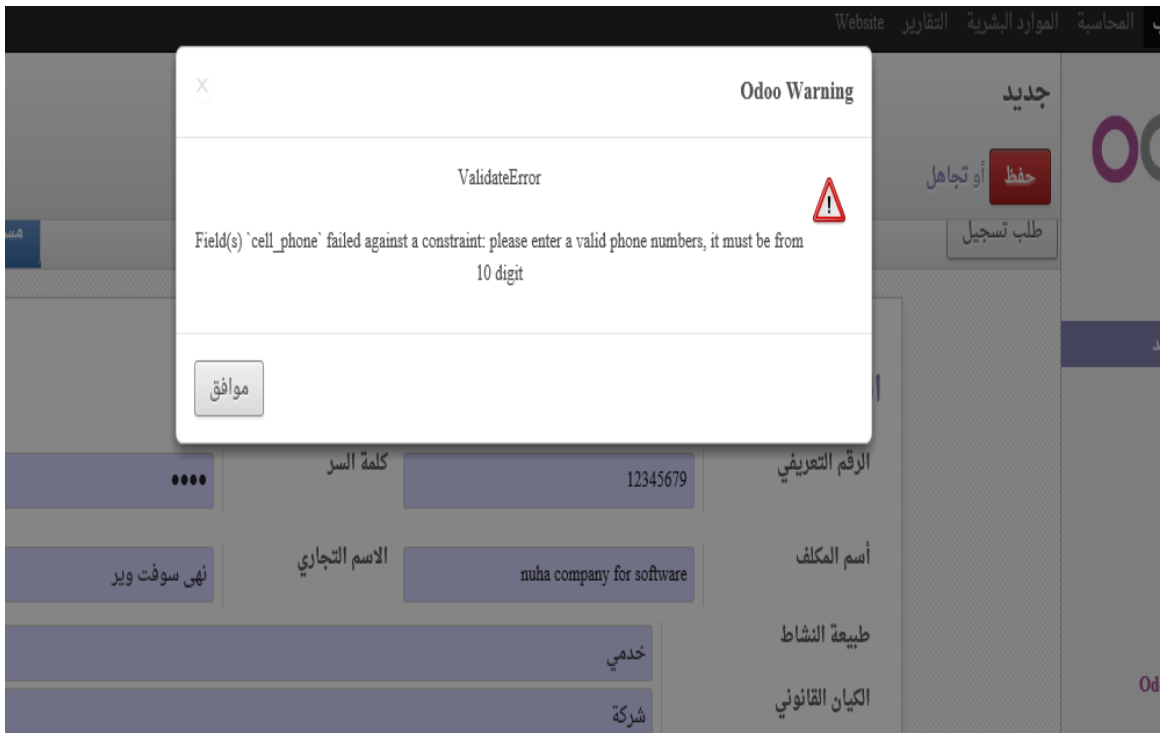


Figure (A.) cellphone validation (must be from 10 digits)

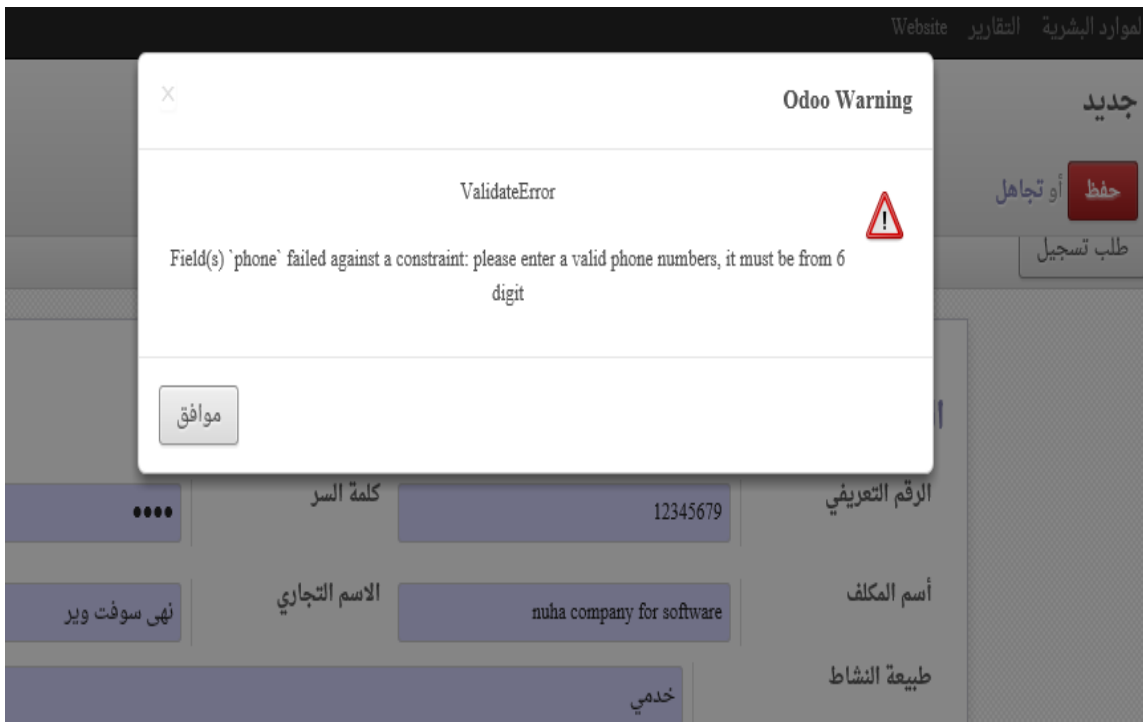


Figure (A.) phone validation (phone must be from 6 digits)

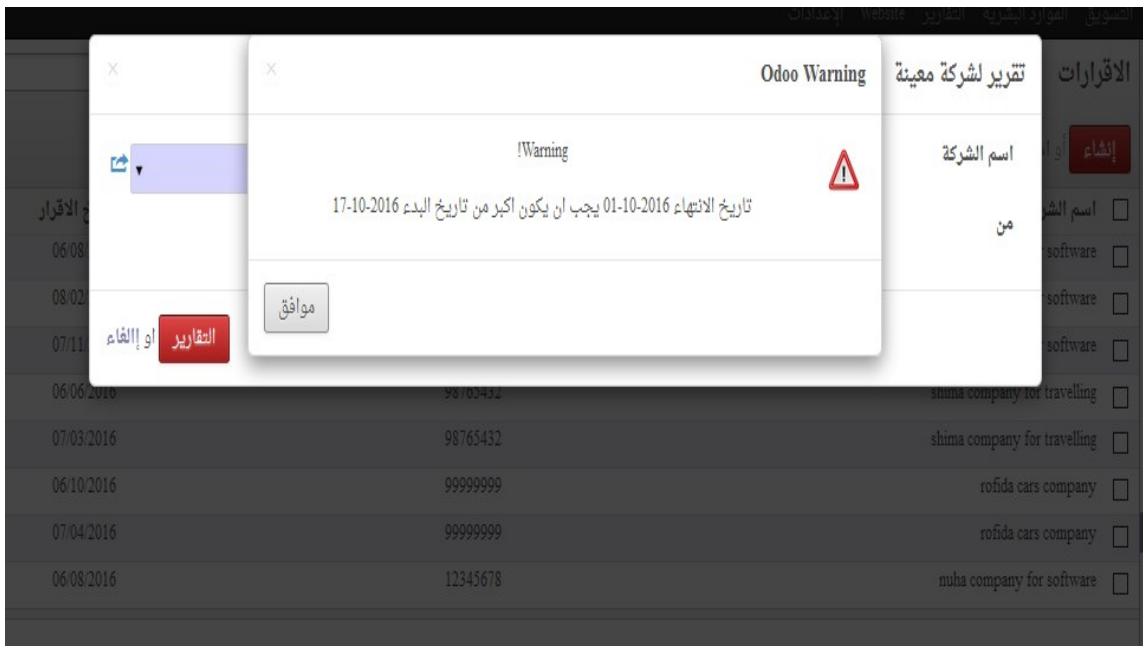


Figure (A.) phone validation (phone must be from 6 digits)

When the admin accept the request of company for registration, system automatically save company's account under the customer account tree.

Account Name	EUR	Debit	Credit	Balance	Code
(Opening Expense - (test	EUR	0.00	0.00	0.00	X1114
(Profit and Loss - (test	EUR	4960.00-	6810.00	1850.00	X2
(Income - (test	EUR	4960.00-	6810.00	1850.00	X20
(Revenue - (test	EUR	4960.00-	6810.00	1850.00	X200
(Product Sales - (test	EUR	4960.00-	6810.00	1850.00	X2001
(Foreign Exchange Gain - (test	EUR	0.00	0.00	0.00	X201
(Expense - (test	EUR	0.00	0.00	0.00	X21
(Cost of Sales - (test	EUR	0.00	0.00	0.00	X210
(Cost of Goods Sold - (test	EUR	0.00	0.00	0.00	X2100
(Overheads - (test	EUR	0.00	0.00	0.00	X211
(Expenses - (test	EUR	0.00	0.00	0.00	X2110
(Foreign Exchange Loss - (test	EUR	0.00	0.00	0.00	X2111
(Salary Expenses - (test	EUR	0.00	0.00	0.00	X2112
حسابات العملاء	EUR	61.10	545.10	606.20	ca
	EUR	223.30-	352.60	129.30	muha n00
	EUR	8.40	0.00	8.40	muha ma1000
	EUR	23.20	192.50	215.70	rfoo rf00
	EUR	0.00	0.00	0.00	shmoo sb00
	EUR	252.80	0.00	252.80	shmoo sb10

Figure (A.) show taxpayers accounts

APPENDIX B

Figure (B.) Use Case Diagram Table Component

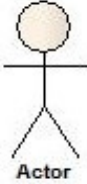

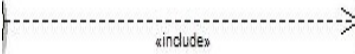
Figure	Name	Definition
	Actor	An Actor models a type of role played by an entity that interacts with the subject
	Use Case	A use case is the specification of a set of actions performed by a system, which produces an observable result that is, typically, of value for one or more actors or other stakeholders of the system.
	Include Relationship	Include is a Directed Relationship between two use cases, implying that the behavior of the included use case is inserted into the behavior of the including use case.

Figure (B.) Sequence Diagram Table Component

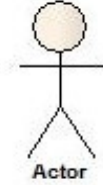
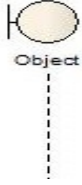
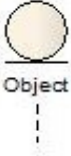
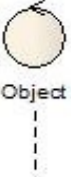
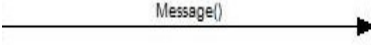
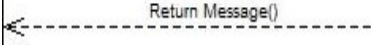
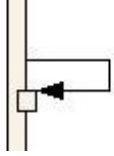




Figure	Name	Definition
	Actor	An Actor models a type of role played by an entity that interacts with the subject.
	Boundary	A lifeline represents an individual participant in the Interaction.
	Entity	A lifeline represents an individual participant in the Interaction.
	Control	A lifeline represents an individual participant in the Interaction.
	Message	A message defines a particular communication between Lifelines of an Interaction.
	Return Message	A message defines a particular communication between Lifelines of an Interaction.
	Recursive Message	A message defines a particular communication between Lifelines of an Interaction.

Figure (B.) Activity Diagram Table Component

Figure	Name	Definition
	Initial Node	An initial node is a control node at which flow starts when the activity is invoked. An activity may have more than one initial node.
	Activity	An activity specifies the coordination of executions of subordinate behaviors, using a control and data flow mode.
	Decision	A decision node accepts tokens on an incoming edge and presents them to multiple outgoing edges.
	Final Node	An activity may have more than one activity final node. The first one reached stops all flows in the activity.