الحمد لله

اللَّهُمَّ صَلِّ عَلَ سَنَيْدِنَا مُحَمَّد الْفَاتِحِ لِمَا أُعْلِقَ وَالْخَاتِم لِمَا سَبَقَ وَالْخَاتِم لِمَا سَبَقَ وَالْخَاتِم لِمَا سَبَقَ وَالْخَاتِم لِمَا سَبَقَ وَالْحَقِ بِالْحَقِّ بِالْحَقِّ بِالْحَقِّ وَالْهَادِي إِلَى صِرَاطِكَ الْمُسْتَقِيمِ وَالْهَادِي إِلَى صِرَاطِكَ الْمُسْتَقِيمِ وَعَلَى آلِهِ حَقَّ قَدْرِهِ وَ مِقْدَارِهِ الْعَظِيمِ. وَعَلَى آلِهِ حَقَّ قَدْرِهِ وَ مِقْدَارِهِ الْعَظِيمِ. وَالْحَمْدُ للهِ الَّذِي وَالْحَمْدُ للهِ الَّذِي وَالْحَمْدُ للهِ اللَّذِي وَالْحَمْدُ للهِ اللَّذِي وَمَاكُنَا لِنَهْتَدِي وَمَاكُنَا لِنَهْتَدِي وَمَاكُنَا لِنَهْتَدِي لَكُولَاانْ هَدَانَا الله لَوْلَاانْ هَدَانَا الله لَوْلَاانْ هَدَانَا الله

الآية

قال تعالى في محكم تنزيله:

﴿ بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ ﴾

{اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾ خَلَقَ الْإِنسَانَ مِنْ عَلَقٍ ﴿٢﴾ اقْرَأْ وَرَبُّكَ الْأَكْرَمُ ﴿٣﴾ الَّذِي عَلَّمَ بِالْقَلَمِ ﴿٤﴾ عَلَّمَ الْإِنسَانَ مَا لَمْ يَعْلَمْ ﴿٥﴾} سورة العلق.

صدق الله العظيم

AKNOWLEDGEMENT

Firstly, we express our deep faith in God and our gratitude for the blessings bestowed on us.

We would like to thank our college staff for their insightful comments and encouragement, but also for the hard motivational challenged which widened out our various perspectives.

We would like to express our sincere gratitude to our advisor Dr.Alsharif Hago Almugadam Yusuf for the continuous support of our project and related research, for his patience, motivation, and immense knowledge. His guidance helped us in all the phases of the project. We could not have imagined having a better advisor and mentor for our project.

Besides, we thank our fellow lab mates for the stimulating discussions, for the sleepless nights we were working together before deadlines, and for all the fun we have had throughout the years.

Last but not the least, We would like to thank our families, parents, brothers, friends, colleagues and all those who contributed to supporting us spiritually throughout this project and our life in general.

DEDICATION

To my dear Mother, You have provided the guidance I needed throughout my life, things just seem to get a little more complicated the older I get. Thanks for all your support, you're always near a tender smile to guide my way you're the sunshine to light my life.

To my dear father Thanks for being there when I need you the most and even when I didn't. To all my family members whom were source of success, by giving me the confidence.

Abstract

The project is provide custom structure for Software As Service ERP System by providing three modules (HR, Project management and Accounting unit) on the website then the system will create these modules which the customer has chosen and the data base after he subscribed successfully.

Also the project guarantee the integration between these modules and the payment depends on subscription period, number of users and chosen modules. As it provide subscription controlling from user profile page in the website and display his information from the desktop application.

It has full system developing by Python language because they are the best and most appropriate to ERP system that has been developed by Python language, and has developing desktop application by Java because they are the closest and best suited for such applications.

المستخلص

يقوم المشروع ببناء هيكلية لتقديم نظام تخطيط موارد المؤسسات كخدمة عند الطلب, وذلك بتوفير عدد من الوحدات على الموقع ومن ثم يقوم ببناء الوحدات تلقائيا عند اشتراك الزبون في الخدمة وبناء قاعدة بيانات خاصة بالزبون.

كما يضمن التكامل بين الوحدات المختارة و يراقب قيود تقديم الخدمة للزبون حسب الاشتراك (فترة الاشتراك عدد المستخدميين — الوحدات المختاره) كما يعطي امكانية التحكم في اشتراكه عن طريق صفحته الشخصية وعرض بياناته عن طريق تطبيق سطح المكتب.

تمت برمجة النظام كامل بلغة البايثون لأنها الامثل والأنسب لنظام تخطيط موارد المؤسسات الذي طور وبرمج بلغة البايثون, وتمت برمجة تطبيق سطح المكتب بلغة الجافا لأنهما الأقرب والأنسب لمثل هذه التطبيقات.

List of Terms

#	Terms	Descriptions
1	HTTP	Hyper Text Transfer Protocol
2	ERP	Enterprise resource planning
3	SAAS	Software As A Service
4	SQL	Postgre Structured Query Language
5	XML	Extensible Markup Language
6	HTML	Hyper Text Markup Language
7	XML_RPC	XML for Remote Procedure Call
8	Ajax	Asynchronous Java Script and XML
9	CSS	Cascading Style Sheet
10	UML	Unified Modeling Language
11	OOP	Object-Oriented programming
12	IDE	Integrated Development Environment
13	DBMS	Database Management System
14	ORM	Object-Relational Mapper
15	API	Application Programming Interface
16	URL	Uniform Resource Identifier
17	SMEs	Small and Medium-sized Enterprises
18	Java SE	Java Standard Edition
19	GTK	GIMP Toolkit
20	GIMP	Gnu Image Manipulation Program
21	CEO	Chief Executive Officer

List of Figures

Figure No.	Figure description	Page No.
2.1	OpenERP Architecture.	6
2.2	Human Resource management.	7
2.3	Human Resource management features.	8
2.4	Project management features.	8
2.5	Accounting and Finance Management features.	9
2.6	Software as services importance.	11
2.7	Software as Service ERP feature.	13
3.1	Odoo Definition.	22
3.2	Use case Diagram for System.	28
3.3	Create service for system side.	29
3.4	Sequence Diagram login for Admin Side.	30
3.5	Sequence Diagram login for user Side.	31
3.6	Sequence Diagram registrations for user Side.	32
3.7	Sequence Diagram payment for user Side.	33
3.8	Sequence Diagram modify for user Side.	34
3.9	Sequence Diagram External payment for user Side.	35
3.10	Sequence Diagram support for user Side.	36
3.11	Activity Diagram for System.	37
4.1	Running Database Server.	38
4.2	Running Project Server.	39
4.3	Pricing screen.	39
4.4	Screen shows the main information of customer.	40
4.5	main information for registrations	41
4.6	selecting the systems	42
4.7	selecting the systems of consumer	43

Figure No.	Figure description	Page No.
4.8	information of the system	44
4.9	filling the details information	45
4.10	filling the purchase information	46
4.11	shows that all information is correct,	47
4.12	create the database for system	48
4.13	Massage E-mail	49
4.14	Login process to system.	50
4.15	filling login information for administer	51
4.16	shows all the messages customer and visitors	52
4.17	shows all the reports of all companies	52
4.18	filling login information for customer	53
4.19	customer profile	54
4.20	shows edit process to main information for customer	55
4.21	process of entering the system	56
4.22	shows the process of entering the system by user	57
4.23	shows process of entering to users	58
4.24	shows process of sending complaints and suggestions	59
4.25	shows download the file from e-mail	60
4.26	shows the main interface of Desktop application	61
4.27	filling customer information	62
4.28	shows all Customer information	63
4.29	shows official website of the system	64
A.1	Database Company	70
A.2	Database Person part 1	71
A.3	Database Person part 2	72
A.4	Database Contact	73
B.1	Validations of Registration.	74

Figure No.	Figure description	Page No.
B.2	Validations of choose modules.	75
В.3	Validations of details modules.	76
B.4	Validations of company name.	77
B.5	Validations of company name.	78
C.1	install App step 1	79
C.2	location for install App step 2	80
C.3	accept for install App step 3	80
C.4	install step 4	81
C.5	finishing install App step 5	81
C.6	Users activation step 1	82
C.7	Users activation step 2	82
C.8	Users activation step 3	83
C.9	Final step for Users activation.	83
D.1	Explain form UML	84
D.2	UML Relationships	85

List of Tables

Table No.	Table description	Page No.
A.1	Information of companies	69
A.2	Information of person part 1	70
A.3	Information of person part 2	71
A.4	Contact massages	72
D.1	Explain forms UML	82
D.2	UML Relationships	83

Table of Contents

Topic No.	Topic description	Page No.		
	الحمد	i		
	الآية	ii		
	Dedication.	iii		
	Acknowledgements.	iv		
	Abstract.	v		
	المستخلص.	vi		
	List of Terms.	vii		
	List of figure.	viii		
	List of Table.	ix		
	List of Contents.	x-xi		
	CHAPTER 1			
1.1	Introduction.	1		
1.2	Research Problem.	1-2		
1.3	The importance of Research.	2		
1.4	Research Objectives.	3		
1.5	Scope.	3		
1.6	Research Structure.	4		
CHAPTER 2				
2.1	Introduction.	5		
	2.1.1 Open Enterprise Resource planning.	5		
	2.1.1.1 The architecture of OpenERP	5		
	2.1.1.2 The main components of OpenERP	6		
	2.1.1.3 ERP modules guide	7-9		
	2.1.2 Software as a Service.	10-11		
	2.1.3 SaaS ERP.	12-13		

Topic No.	Topic description	Page No.
2.2	Previous Studies	14
	2.2.1 Cloud ERP: a New Dilemma to Modern	14
	Organizations.	
	2.2.2 ERP Software as Service (SaaS): Factors	15
	Affecting Adoption in South Africa.	
	2.2.3 Determinants of SaaS ERP System	16
	Adoption.	
	2.2.4 Enterprise 2.0 – is the market ready.	17
	2.2.5 Adoption of ERPs in a Medium-sized.	17-18
	2.2.6 Summary of previous studies.	18
	CHAPTER 3	
3.1	Introduction.	19
3.2	System Requirements.	19
	3.2.1 Functional Requirements.	19-20
	3.2.2 Non Functional Requirements.	20
3.3	Technologies to be used:	21
	3.2.1 SaaS.	21-22
	3.2.2 Odoo.	22
	3.2.3 Python.	23
	3.2.4 PostgreSQL.	23
	3.2.5 XML.	23
	3.2.6 HTML5.	24
	3.2.7 XML-RPC.	24
	3.2.8 Bootstrap.	24
	3.2.9 CSS.	25
	3.2.10 Tornado	25

	3.2.11 Peewee.	25	
	3.2.12 ERPpeek.	25	
	3.2.13 NetBeans.	25	
	3.2.14 Java.	26	
	3.2.15 Eclipse.	26	
	3.2.16 Mozilla Firefox.	26	
	3.2.17 UML.	26	
3.4	Authority of System	27	
3.5	System Analysis:	28	
	3.5.1 Use Case Diagram.	28	
	3.5.2 Sequence Diagram:	29	
	3.5.2.1 Create service Diagram.	29	
	3.5.2.2 Login Diagram Admin Side.	30	
	3.5.2.3 Login Diagram user Side.	31	
	3.5.2.4 Registration Diagram.	32	
	3.5.2.5 Buy Diagram.	33	
	3.5.2.6 Modify Diagram.	34	
	3.5.2.7 Payment External Diagram.	35	
	3.5.2.8 Customer Support Diagram.	36	
	3.5.3 Activity Diagram.	37	
CHAPTER 4			
4.1	Introduction.	38	
4.2	Database System.	38	
4.3	How The System Works	38	
	4.3.1 Process of server running.	38-39	
	4.3.2 Registration process.	39-47	

	4.3.3 Creating the Database System.	48	
	4.3.4 Account confirm process by E-mail.	49	
	4.3.5 Login Process.	50-57	
	4.3.6 Process of activating the user.	58	
	4.3.7 Process Complaints and suggestions.	59	
	4.3.8 Process monitor Account.	60-64	
CHAPTER 5			
5.1	Introduction.	65	
5.2	Results	65	
5.3	Conclusion.	66	
5.4	Recommendations.	67	
	References.	68-69	
	Appendices.	70-85	