

آية

قال عز وجل:

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(لَقَدْ أَرْسَلْنَا رُسُلَنَا بِالْبَيِّنَاتِ وَأَنْزَلْنَا مَعَهُمُ الْكِتَابَ وَالْمِيزَانَ لِيَقُومَ النَّاسُ بِالْقِسْطِ وَأَنْزَلْنَا
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صدق الله العظيم

سورة الحديد {25}

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DEDICATION

For the person who have always been a source of encouragement, hope, strength and inspiration my father (ISSAMALDEEN)

For the angel who have unconditional love and support, may Allah forever bless you beloved mother (OMAIMA)

For the best company one could ever have, the ones who share with you your sorrow and joy my brothers Muhaned, Mustafa, My sister Dania.

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ABSTRACT

Business is the most important fields in the world. Factors that effects on business are technology, competitions between companies and customer needs. The problem of the research concluded in the limitation of Customer Relationship Management (CRM) systems, shortage in understanding customer needs and looking to the customer in a single dimension. The objectives of this research are designing and building data marts (DMs) for special purpose to measure the Customer Value Development (CVD) and to look at the customer in multidimensional view. The research focused on Business Intelligence (BI) technologies and it is considered as a quantitative research. It takes local bank as a case study to evaluate the customer value and collect a financial data to store it into a data warehouse (DW). Then making analysis and preprocessing operations on it to build and execute a multidimensional model to generate accurate reports that help in decision-making. The results of the research are introducing a new multidimensional framework of information on the subject of multidimensional database and find a solution that will make using multidimensional databases, easier and convenient for both expert and non-expert.

المستخلص

تعتبر الأعمال من أهم المجالات في العالم، العوامل التي تؤثر على الأعمال هي التكنولوجيا، المنافسة بين الشركات واحتياجات العميل. مشكلة البحث تتمثل في محدودية أنظمة ادارة علاقات العملاء ونقص فهم متطلبات واحتياجات العملاء والنظر الى العميل بنظرة أحادية البعد. أهداف هذا البحث تصميم وبناء مستودع بيانات ذات غرض محدد لقياس قيمة العميل والنظر اليه بنظرة متعددة الأبعاد. ركز البحث على تقنيات ذكاء الأعمال ويصنف هذا البحث كبحث كمي، حيث تم أخذ بنك سوداني كدراسة حالة لتقييم قيمة العميل وتم جمع بيانات مصرفية لتخزينها في مستودع بيانات كبير. بعد ذلك تحليلها وعمل معالجات عليها لبناء وتنفيذ نموذج متعدد الأبعاد لاستخراج تقارير دقيقة تساعد في اتخاذ القرار. نتائج هذا البحث تتلخص في تقديم إطار جديد في مجال قواعد البيانات متعددة الأبعاد وإيجاد حل ملائم لجميع أنواع قواعد البيانات متعددة الأبعاد وجعلها سهلة الاستخدام.

LIST OF TERMS

Term	Description
CRM	Customer Relationship Management
BI	Business Intelligence
DWH	Data Ware House
OLAP	Online Analytical Processing
CVD	Customer Value Development
CLC	Customer lifecycle
DM	Data Mart
E-CRM	Electronic Customer Relationship Management
DIKW	Data - Information – Knowledge – Wisdom
RQL	Recommendation Query Language
AGGR	Aggregation
DDL	Data Definition Language
SQL	Structured Query Language
MOLAP	Multidimensional Online Analytical Processing

MDBMS	Multidimensional Database Management System
ROLAP	Relational Online Analytical Processing
SSMS	Sql Server Management Studio
ETL	Extract Transform Load

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