PROJECT REPORT

(Submitted for the Degree of B.com Honours. In Accounting & Finance under the University of Calcutta)

TITLE OF THE PROJECT:

DATABASE MANAGEMENT SYSTEM Submitted by

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Year of Submission:

2023

STUDENT'S DECLARATION

I hereby declare that the Project Work with the title "DATABASE MANAGEMENT SYSTEM" submitted by me for the partial fulfilment of the degree of B.Com.Honours in Accounting & Finance under the University of Calcutta is my original work and has not been submitted earlier to any other University for the fulfilment of the requirement for any course of study.

I also declare that no chapter of this manuscript in whole or in part has been incorporated in this report from any earlier work done by others or by me.

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Date:

SUPERVISOR'S CERTIFICATE

This is to certify that Afsar Ahmad Khan, a student of B.Com Honours in Accounting & Finance of BANGABASI MORNING COLLEGE under the University of Calcutta has worked under my supervision and guidance for his Project Work and prepared a Project Report with the title – "DATABASE MANAGEMENT SYSTEM", which he is submitting, is the genuine and original work to the best of my knowledge.

Signature

Name: Debasish Biswas, Dipika Das

College: Bangabasi Morning College

Place: KOLKATA

Date:

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INTRODUCTION

Data is the cornerstone of any modern software application, and databases are the most common way to store and manage used by applications.

A database management system (DBMS) is a software tool that enables users to manage a database easily. It allows users to access and interact with the underlying data in the database. These actions can range from simply querying data to defining database schemas that fundamentally affect the database structure.

Furthermore, DBMS allow users to interact with a database securely and concurrently without interfering each user and while maintaining data integrity.

Types of Database Management:

- <u>Relational database management systems (RDBMS)</u>: Microsoft SQL, MYSQL, and Oracle Database are some popular DBMS under this type.
- Document database management systems (DoDBMS): MongoDB Azure cosmos DB are some prominent examples of DoDBMS.
- Columnar database management systems (CDBMS): Some databases that use columnar format are Apache Cassandra, Apache HBase, etc.

ADVANTAGES

Some of them are given as follows below:

- 1. **Better Data Transferring:** Database management creates a place where users have an advantage of more and bettermanaged data. Thus, making it possible for end-users to have a quick look and to respond fast to any changes made in their environment.
- 2. **Better Data Transferring:** The more accessible and usable the database, the more it is prone to security issues. As the number of users increases, the data sharing rate also increases thus increasing the risk of data security. It is widely used in the corporate world where companies invest money, time, and effort in large amounts to ensure data is secure and is used properly.
- 3. <u>Simple</u>: Database management system (DBMS) gives a simple and clear logical view of data. Many operations like insertion, deletion, or creation of files or data are easy to implement.
- 4. **Scalability:** A DBMS can easily handle large volumes of data and can scale up or down depending on the needs of the organization.
- 5. **Data sharing:** A DBMS provides a systematic approach to organizing data in a structured way, which makes it easier to retrieve and manage data efficiency.

DISADVANTAGES

Some of them are given as follows below:

- More costly: Creating and managing a database is quite costly. High-cost software and hardware is required for the database. Also highly trained staff is required to handle the database and it also needs continuous maintenance. All of these ends up making a database quite a costly venture.
- 2. **High complexity:** A Database Management System is quite complex as it involves creating, modifying and editing a database. Consequently, the people who handle a database or work with it need to be quite skilled or valuable data can be lost.
- 3. **Dependence on technology:** Organizations may become dependent on their DBMS, making it difficult to switch to a different system if needed.
- 4. **Performance issues:** A database grow, queries can become slow, and the system may need help to handle large amounts of data.
- 5. **Data integration**: Integrating data from different sources can be complex and time-consuming. As data integration is a complex process, there is always a high risk of errors occurring during the process. Organizations must invest huge resources and time in cleaning and normalizing the data to address data integration issues.

<u>Create MS Access Database Software to</u> <u>Prepare Salary in Your Company</u>

I'll give you the brief instruction to create a payroll system using MS Access to generate monthly salaries & print salary slips easily with this. You can print pay sheets for individual employers and salary details also. No need to install special software, no need special skill but you need MS Access in your computer. This way you can keep each month salary details records under database and can edit or review later.

Instructions

Step 1: Create Main Basic Table

Open Ms Access

Go to main menu

 \succ create table as mentioned below with picture (Fig.1&2)

Add your details which you pay to your staffs every month.

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Fig.4



Fig.5

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Fig.6





- In this assignment, we are required to create a database dbStudentCourse. In this database, we should do the following work:
 - Create three table: tblStudent, tblcourse, and tblstudentcourse,
 - Build the relationship between tblStudent and tblCourse,
- Create a query, and
 - Generate a report based on the query results.

Database Design

- This database design contains three tables: tblStudent, tblCourse, and tblStudentCourse.
- tblStudent (studentID, Sname, GPA)
 - tblCourse (CourseID, CourseTitle, CreditHour, Description)
 - tblStudentCourse (studentID, CourseID, DateTaken, Status)

Tables 🔹 🖉		tblStudent				
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		Sname		Text	Student Full Name	
		GPA		Number	Grade Point Average	
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Open Microsoft Access & click "Blank Database". We'll name the database as "dbStudent.accdb" and save it into a location. Click "Create".

In the database, we can see "Table1", which is the default name created by Access. Right click "Table1" on the top of the datasheet view and choose "Design View". In the pop up window, rename the table as "tblStudent".

Input the field name and choose the data type as shown in Fig.1 above.

Set the first field "StudentID" as the "primary key" by clicking right at the very beginning of the first row. Now, the design of the table "tbIStudent" is completed.

To create other two tables "tblCourse" and "tblStudentCourse", go to the top menu and click.

"create" and then "Table", we can see a new table named "Table1". Repeat the procedures of (b) an dinput the field names and data types as indicated in Fig.2&3.

Now save the work by closing all Table item windows. Input the data as indicated in Fig.4a,4b,4c

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Fig.2 (The Frame of tblCourse)

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Now build relationship for student & course database

Click Database Tools then click Relationships from the Tool Menu, a dialogue box will appear.

Select all the tables & click the button "Add". Simply drag CourseID from tbICourse to tbIStudentCourse and StudentID from the tbIStudent to tbIStudentCourse.

The relationships among the tables are built as shown in Fig.5



Query Tables (Manually)

Click "Create" menu, we will see several options to create a query. We will use "Query design". Then add all the tables when the "Show Table" box is popped up.

Then drag the data fields we need from tables to the query layout area where the tables are shown. Click "Run", we will get a query table. Now we list StudentID, SName, GPA, and CourseTitle and name the query as "qryStudentCourse".

Create Reports

Click "Create" on the menu & then "Report Wizards"
 Select the query that we just generated & select all the fields.

Follow the instructions to create the report based on the query just created: rptStudentCourse.

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BIBLIOGRAPHY Here are some of the resources which helps me to develop this project: -**BOOKS WEBSITES PEOPLES** -DBMS -Google -Prof. Debasish Biswas -Yahoo Search -My Friends -My Family 21