



Project Report

Title : Database Management System

Submitted for the Degree of B.Com. General in Accounting &
Finance under the University of Calcutta

Submitted by :

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CU Roll No. : **201144-22-0148**

College Name : **Bangabasi Morning College**

Year of Submission : **2023**

Supervised by:

Name of the SUPERVISOR : **Prof. DIPIKA DAS**
Prof. DEBASHISH BISWAS

College Name : **Bangabasi Morning College**

ACKNOWLEDGEMENT

This is my proud privilege to express my deepest sense of gratitude & Indebtedness to my supervisor , **PROF. DIPIKA DAS, PROF. Debashish Biswas**, head of the department of the commerce in words perhaps would fail to express the gratitude I owe to him. It would have been impossible for me to complete the project work without his constant & valuable suggestion at every stage of the project work.

I am also grateful to all other teachers of the department of commerce for their constants support.

I express my gratitude to all my friends for their help to complete the project work.

Signature

Annexure - 1A

Supervisor's Certificate

This is to certify that Jeetesh Kumar Jha a student of B.Com. General 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 "DBMS".

which he is submitting, is his/her genuine and original work to the best of my knowledge.

Name : PROF. DIPIKA DAS & PROF. DEBASHISH BISWAS

College : Bangabasi Morning College

Place : Kolkata

Date :

Signature

PROF. DIPIKA DAS

Signature

PROF. DEBASHISH BISWAS

Annexure - 1B

Student's Declaration

I hereby declare that the Project Work of **DBMS** submitted by me for the partial fulfilment of the degree of B.Com. General in Accounting & Finance under the University of Calcutta is my original work and has not been submitted earlier to any other University /Institution 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. However, extracts of any literature which has been used for this report has been duly acknowledged providing details of such literature in the references

Name : Jeetesh Kumar Jha

CU Reg. No. : 144-1111-1490-20

CU Roll No. : 201144-22-0148

Date :

Signature

Synopsis

Introduction

A Database Management System (DBMS) is a software system that enables users to create, maintain, and manipulate data stored in a database. A database is a collection of data that is organized in a specific way, typically stored on a computer system.

The primary function of a DBMS is to provide a way for users to store and retrieve data efficiently and securely. It does this by managing the storage of the data, controlling access to the data, and ensuring data integrity and consistency.

A DBMS typically includes several components, such as a data dictionary, which stores information about the data in the database, a query language, which allows users to interact with the database, and tools for managing and administering the database.

Advantages of DBMS

1. **Data Consistency:** DBMS ensures that data is consistent across the database, thus reducing the possibility of data inconsistencies and errors.
2. **Data Security:** DBMS provides various security features, such as access controls, encryption, and backup and recovery mechanisms, to ensure data security.
3. **Improved Data Sharing:** DBMS allows multiple users to access and manipulate data simultaneously, improving data sharing and collaboration.
4. **Improved Data Accessibility:** DBMS provides powerful tools for searching and retrieving data, making it easier for users to access the data they need.
5. **Improved Data Integration:** DBMS allows data from different sources to be integrated and stored in a single database, making it easier to manage and analyze.

Synopsis

Disadvantage of DBMS

1. **Complexity:** DBMS can be complex to set up and maintain, requiring specialized skills and expertise.
2. **Cost:** DBMS can be expensive, especially for larger systems or those that require specialized features or capabilities.
3. **Performance:** DBMS can sometimes be slower than alternative approaches, such as flat files or spreadsheets, especially when dealing with large amounts of data.
4. **Dependence:** DBMS can create a dependence on a single vendor or technology, making it difficult to switch to a different system or technology in the future.
5. **Potential for Data Loss:** DBMS is vulnerable to data loss due to hardware failures, software bugs, or other technical issues, requiring robust backup and recovery mechanisms to be in place.

Features of Database Management System

1. **Data Definition Language (DDL):** This feature allows users to define and modify the structure of the database, including creating, modifying, and deleting tables, views, and other database objects.
2. **Data Manipulation Language (DML):** This feature allows users to manipulate the data stored in the database, including inserting, updating, and deleting data.
3. **Query Language:** A query language is a tool that allows users to retrieve specific data from the database by specifying certain conditions or criteria.
4. **Data Integrity:** DBMS enforces data integrity rules, such as referential integrity, to ensure the consistency and accuracy of the data stored in the database.
5. **Transaction Management:** DBMS provides transaction management features, which enable users to perform a series of operations as a single unit of work, ensuring that all operations are completed or none at all.

Create Ms Access Database Software to Prepare Salary in Your Company:

I'll give you the brief instruction to create a Payroll system using MS access for generate monthly salaries and 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

Step 2: Create Query for Basic Main Table

Step 3: Create Pay Sheet Details

Step 4: Create a Salary Slip

Step 5: Create a Form to Enter Data

Step 6: Enter Staff Details

Step 1: Create Main Basic Table

- Open Ms Access.
- Go to main menu & create table as mention with picture.
- Add following details or your details what you pay to your staff monthly.

(Image in Fig.1)

Field Name	Data Type
Month	Text
EPF no :	Number
Name:	Text
Position:	Text
Address:	Text
Basic salary:	Currency
Travelling Allowance:	Currency
Special Allowance:	Currency
Salary Advance	Currency
Staff Loan	Currency
No of OT hours:	Number
No of Working Days :	Number
Working or Not :	Yes/No

Field Properties	
General	
Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	No
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	

Fig.1

Step 2: Create Query for Basic Main Table

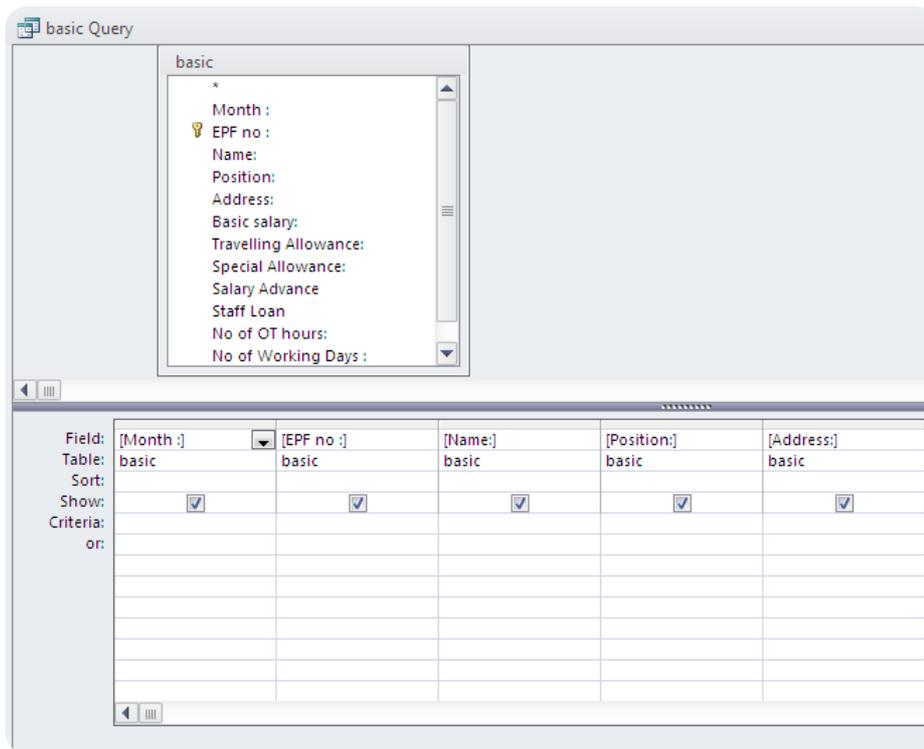


Fig.2

Step 3: Create Pay Sheet Details

- Create a report base on monthly transaction for pay sheet.
- insert formula for auto calculate OT / No pay/ and net salary

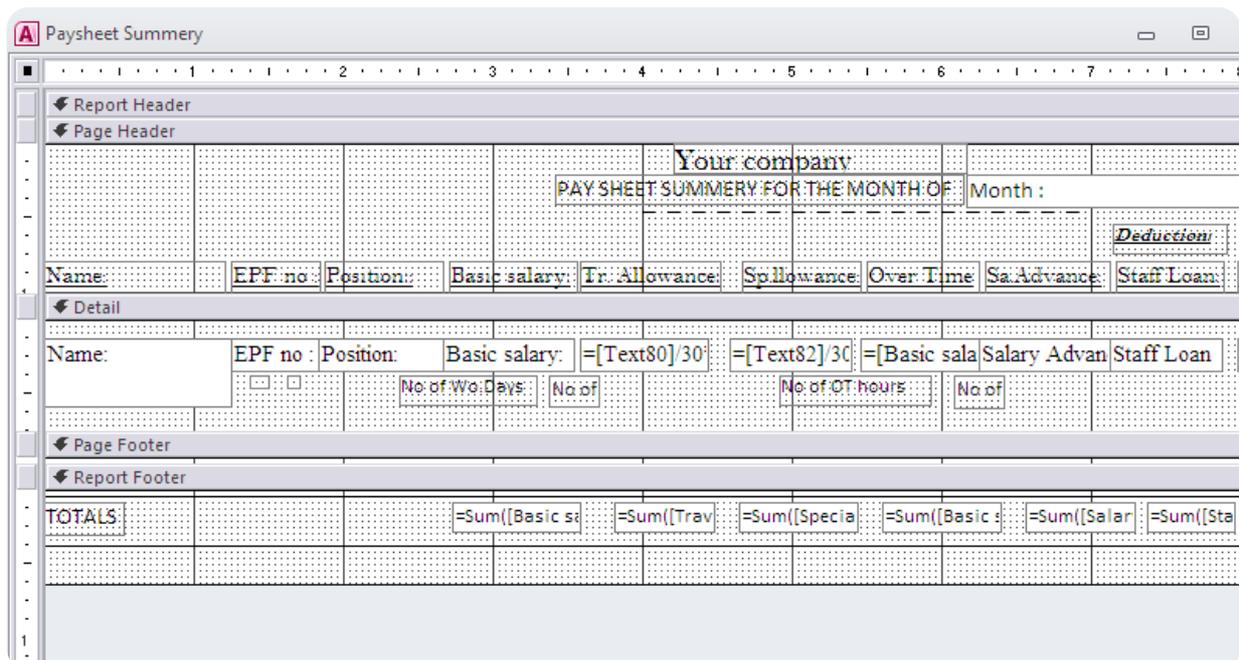


Fig.3

Step 4: Create a Salary Slip

- Create a salary Slip how you want to give to your staff as below.
- each and every details what you want to show in your staff salary slip..

Fig.4

Step 5: Create a Form to Enter Data

- Now create a form to enter data to your program.
- base on your table crate a form to enter data very easily.

Fig.5

Fig.6

Step 6: Enter Staff Details

- Now you are already finish your program.
- enter staff details.

PAY SHEET FOR THE MONTH OF

Name:
 EPF no :
 Address::
 Position::

Basic salary:
 Travelling Allowance:
 Special Allowance::
 Over Time

Deduction:
 Salary Advance:
 Staff Loan:
 EPF 8%
 Total

 EPF 10%
 ETF 3%

No of Wo.Days
 No of OT hours

 Signature_Date

Fig.7

BASIC details

STAFF SALARIES FOR THE MONTH OF

EPF NO	Name	Basic salary	Payee	Staff Loan	Advance	No Pay	Telephone	Insurance	Staff EPF	NET PAID	Comp EPF	ETF
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
									0.00		0.00	0.00

Thursday, November 10, 2016

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Fig.8

Assignment:-

In this assignment, you are required to create a database – *dbStudentCourse*.

In this database, you should do the following work:

- Create three tables: *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 contains three tables: *tblStudent*, *tblCourse*, and *tblStudentCourse*. *tblStudent*(StudentID, Sname, GPA)
- *tblCourse*(CourseID, CourseTitle, CreditHour, Description)
- *tblStudentCourse*(StudentID, CourseID, DateTaken, Status)

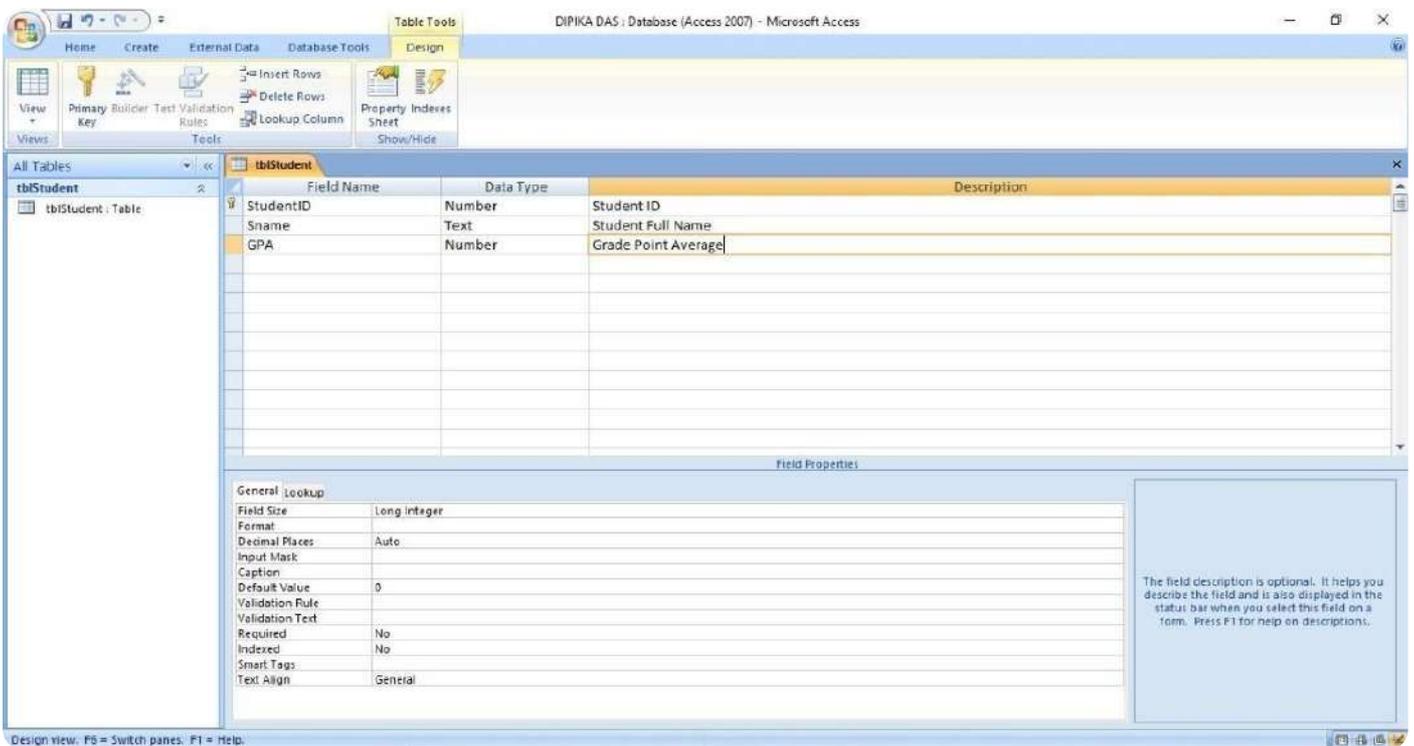


Fig.1

- Open Microsoft Access 2013, and click “Blank Database”. You need to name your database as “dbStudent.accdb” and save it into a location that you will remember. Click “Create”.
- In the database, you will see “Table1”, which is the default name created by Access. The datasheet view of “Table1” is on the right hand side of the database. 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 Figure 1 above.
- Set the first field “StudentID” as the “primary key” by right clicking the very beginning of the first row. Now, the design of the table “tblStudent” is completed.
- To create other two tables “tblCourse” and “tblStudentCourse”, go to the top menu and click
- “Create” and then “Table”, you will see a new table named “Table1”. Repeat the procedures of b) and input the field names and data types as indicated in {Figure 2 and 3}.
- Save your work by close all Table item windows
- Input the data as indicated in {Figure 4a, 4b, and 4c}.

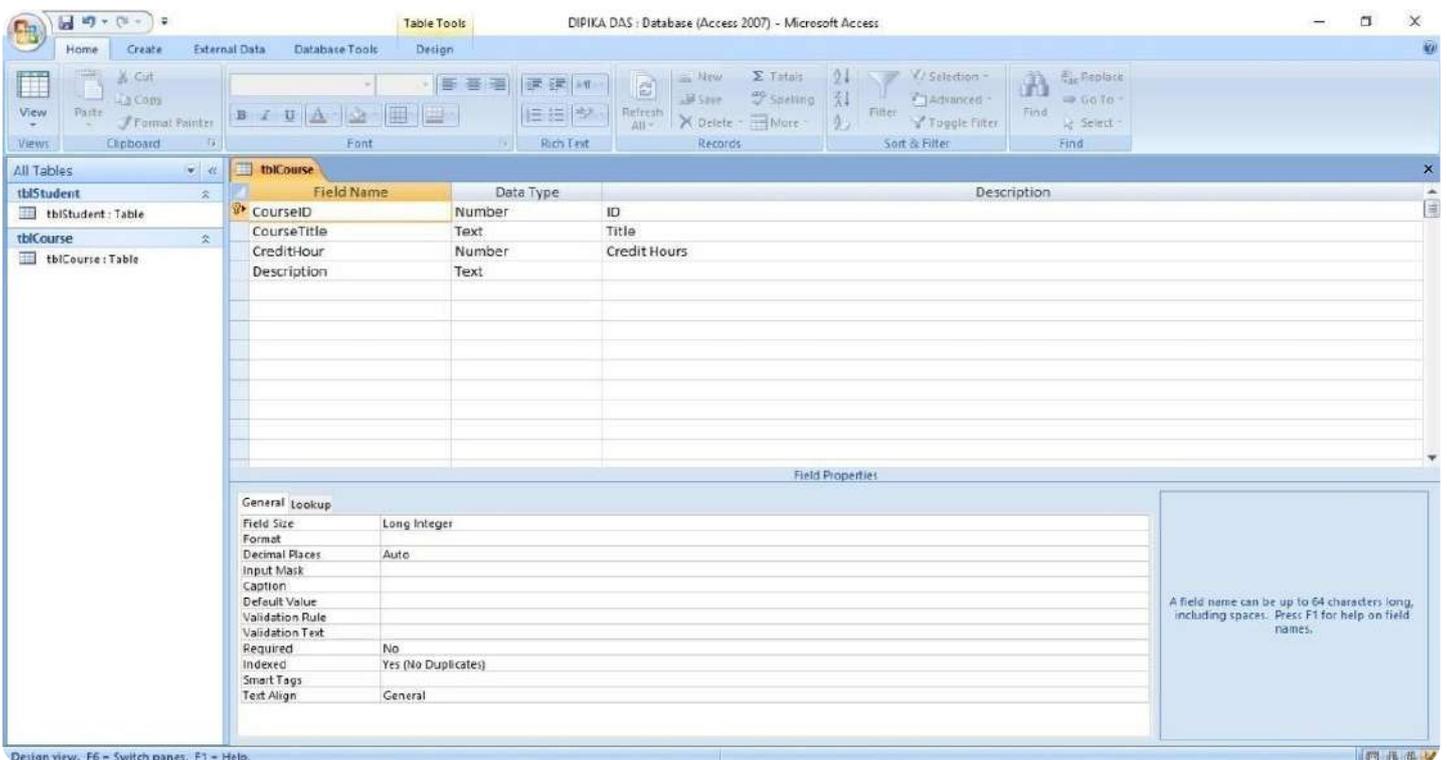


Fig.2

Using MS Access to Create a Database

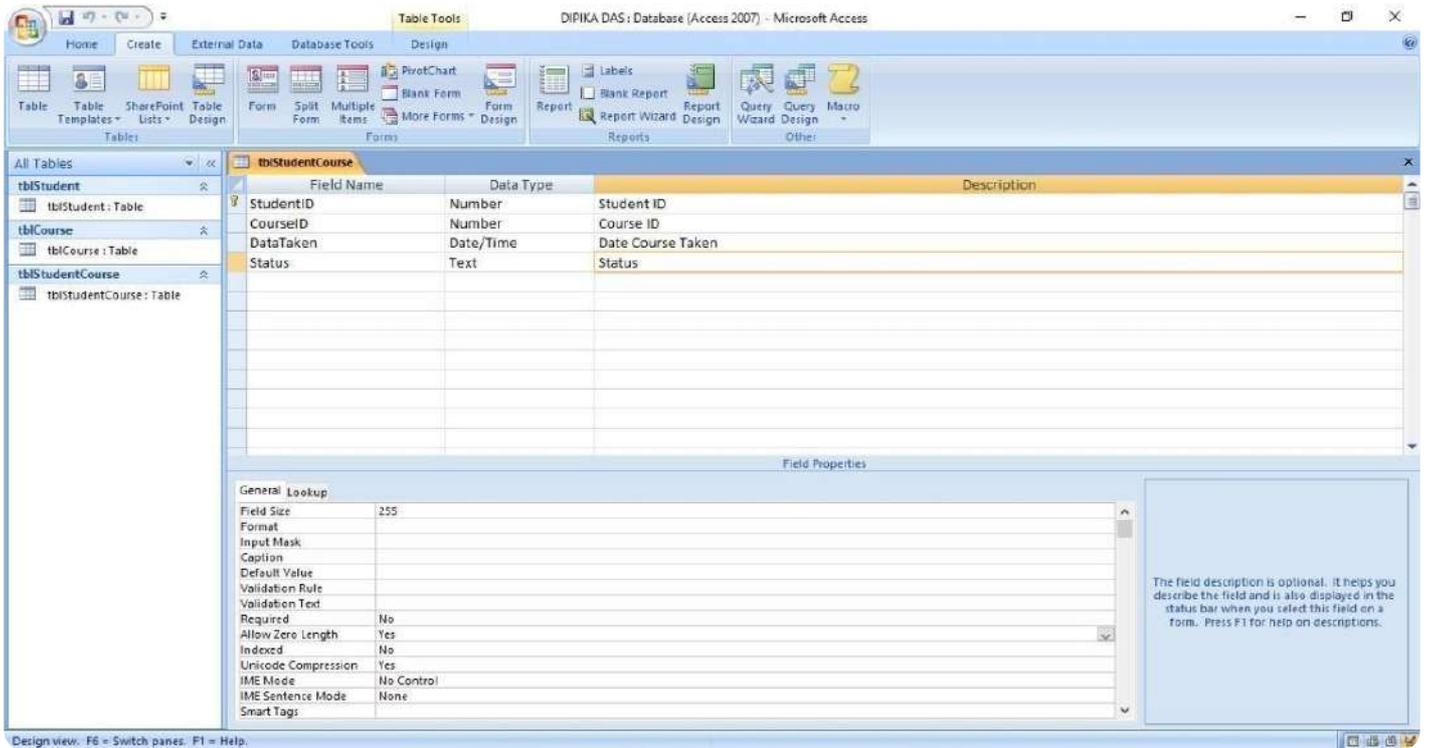


Fig.3

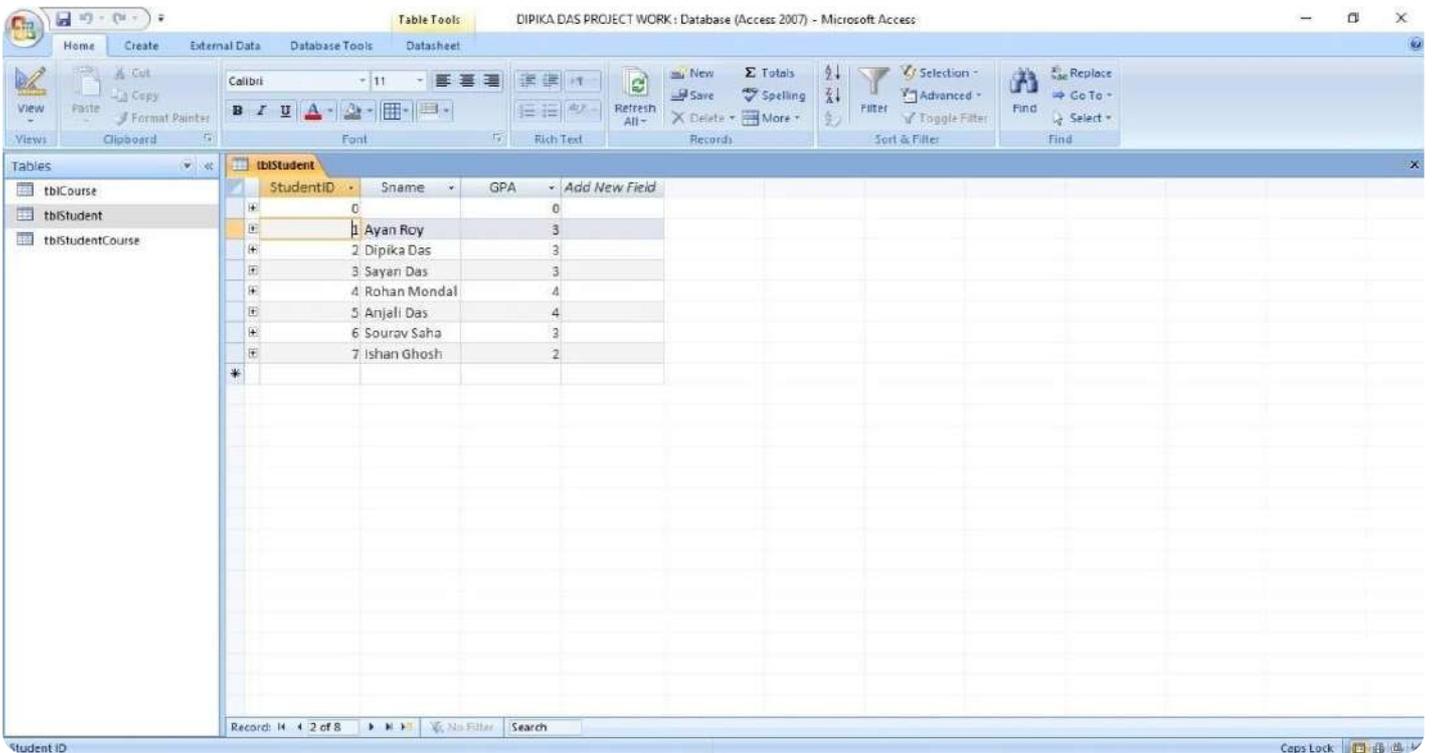


Fig.4a

CourseID	CourseTitle	CreditHour	Description
0		0	
1	Harvesting	3	Forest Operati
2	Computer App	4	Concept
3	Biometrics	5	DNA
4	Finger Printing	3	Forensics
7			E

Fig.4b

StudentID	CourseID	DataTaken	Status
0	0		
1	1	1/9/2013	C
1	2	6/30/2012	F
1	3	8/14/2001	W
2	1	1/9/2013	C
2	3	1/1/2001	C
4	2	8/14/2013	A
7	1	1/9/2013	B
7	2	8/14/2013	E

Fig.4c

- Build relationship for Student and course database
- Click Database Tools-> Relationships... from the Tool menu, you will see a dialogue box.
- Select all the tables and hit the button "Add". Simply drag CourseID from

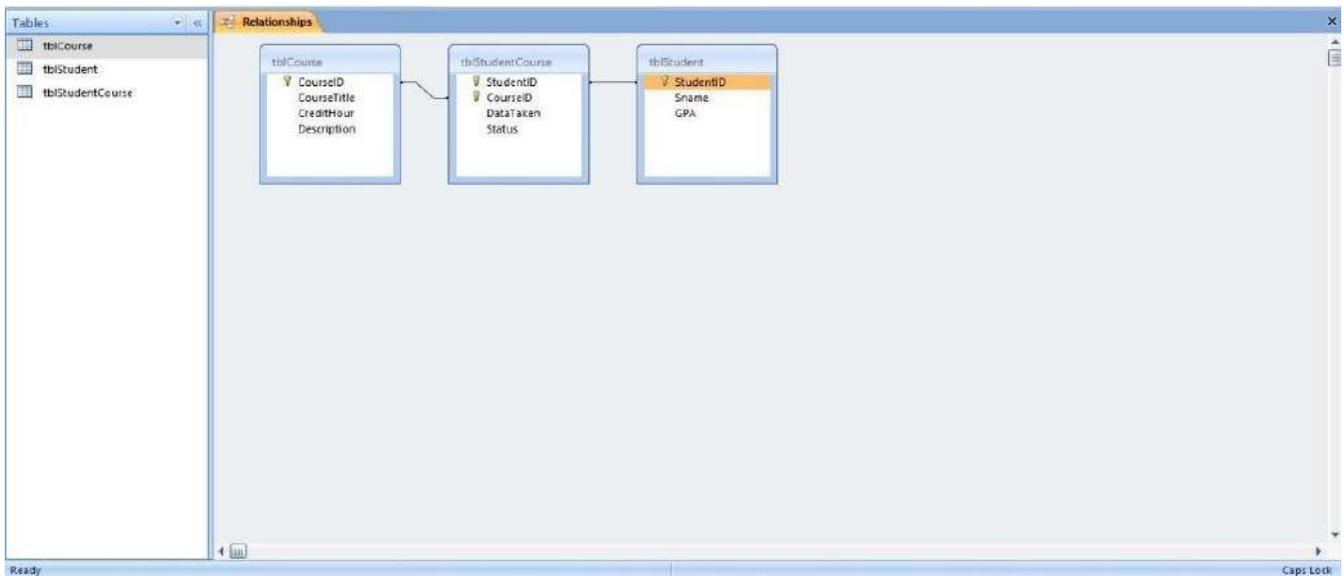


Fig.5

- tblCourse to tblStudentCourse and StudentID from tblStudent to
- tblStudentCourse. The relationships among the tables are built (Figure 5)

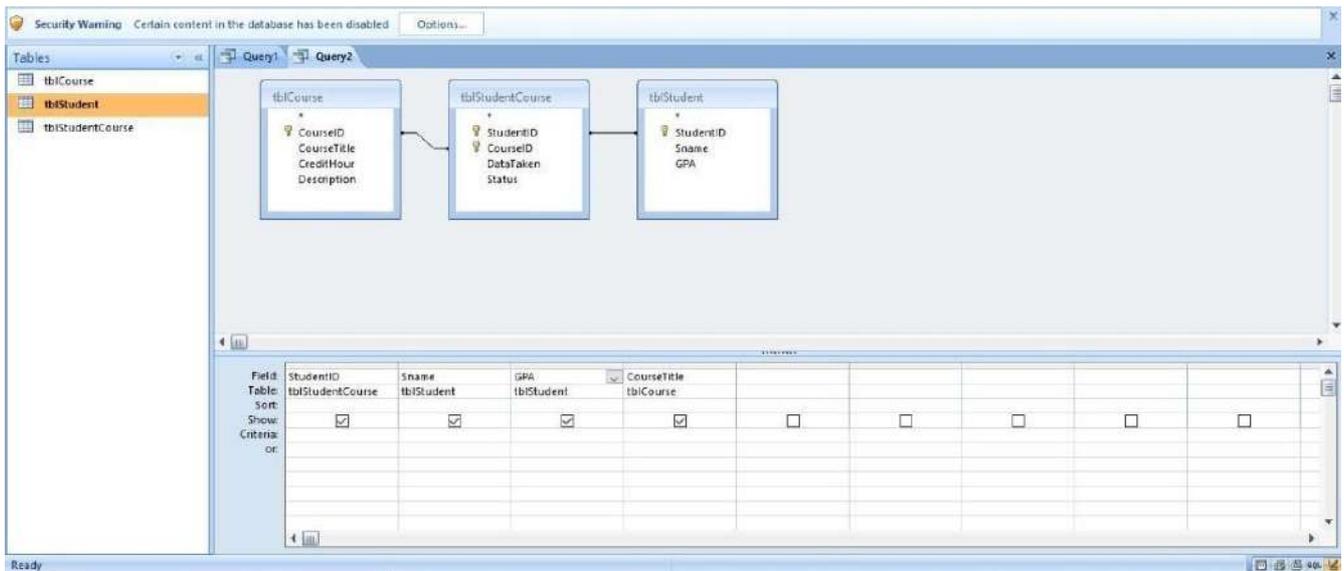


Fig.6

Query Manually

- Click "Create" menu, you will see several options to create a query. We will use "Query design". When the "Show Table" box is popped up, add all the tables.
- Drag the data fields you need from tables to the query layout area where the tables are shown. Click "Run", you will get a query table. In your assignment, you list StudentID, SName, GPA, and CourseTitle; and name your query as qryStudentCourse.



Create Reports

- Click “Create” on the menu and then “Report Wizards”
- Select the query you just generated and select all the fields.
- Follow the instructions to create your own report based on the query you just created: rptStudentCourse.

Bibliography

Here are some of the resources which helps me to develop this project:-

Books

- **DBMS**

Websites

- Google
- Yahoo Search

Peoples

- Prof. Debashish Biswas
- Prof. Dipika Das
- My Firends
- My Family