DEPARTMENT OF COMPUTER SYSTEMS ENGINEERING
MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
Database Management Systems (4th Semester) 18CS
Lab Experiment 1

Roll No: **Date of Conduct:**

Submission Date: **Grade Obtained:**

Problem Recognition (0.3)	Completeness & accuracy (0.4)	Timeliness (0.3)	Score (1.0)

Objective: To create database in Ms. Access and to create relationships between tables in a database.

Tools: MicroSoft Access

Introduction:

MS ACCESS: Microsoft Access is a Database Management System (DBMS) from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software development tools

- Microsoft Access is just one part of Microsoft's overall data management product strategy.
- It stores data in its own format based on the Access Jet Database Engine.
- Like relational databases, Microsoft Access also allows you to link related information easily. For example, customer and order data. However, Access 2013 also complements other database products because it has several powerful connectivity features.

Microsoft Access stores information which is called a database. To use MS Access, you will need to follow these four steps −

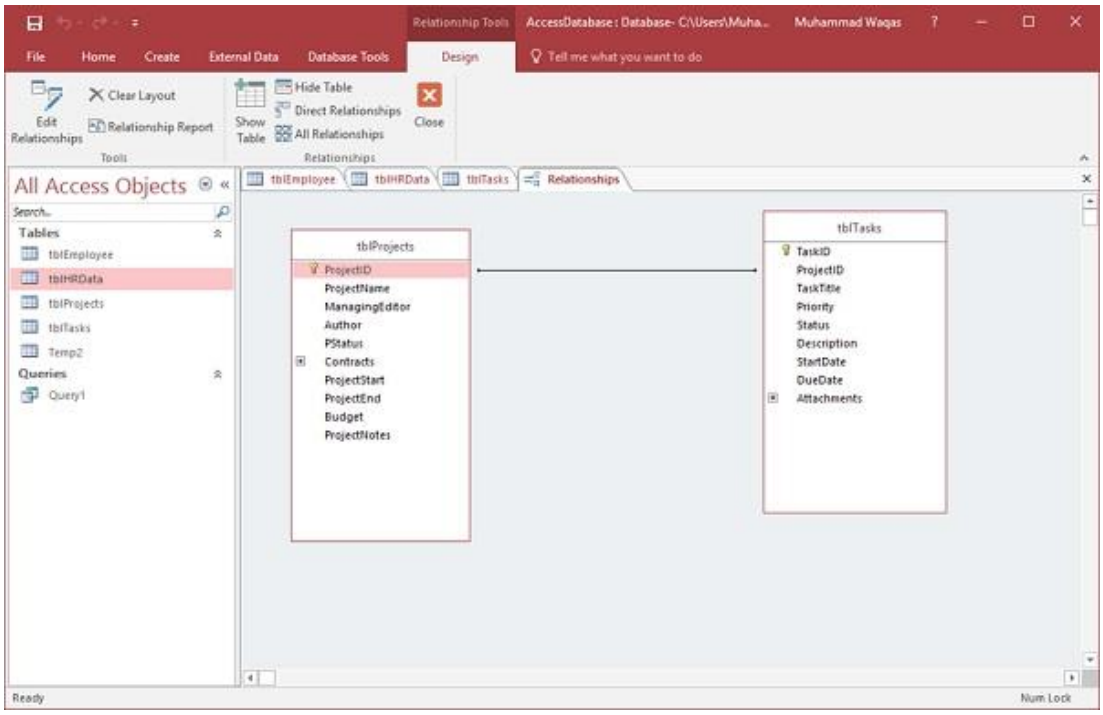
- **Database Creation** − Create your Microsoft Access database and specify what kind of data you will be storing.
- **Data Input** −After your database is created, the data of every business day can be entered into the Access database.
- **Query** −This is a fancy term to basically describe the process of retrieving information from the database.
- **Report** (optional) − Information from the database is organized in a nice presentation that can be printed in an Access Report.

Why Create Table Relationships?

MS Access uses table relationships to join tables when you need to use them in a database object. There are several reasons why you should create table relationships before you create other database objects, such as forms, queries, macros, and reports.

- To work with records from more than one table, you often must create a query that joins the tables.
- The query works by matching the values in the primary key field of the first table with a foreign key field in the second table.
- When you design a database, you divide your information into tables, each of which has a primary key and then add foreign keys to related tables that reference those primary keys.
- These foreign **key-primary key pairings** form the basis for table relationships and multi-table queries.

Example Relationships Database.



Lab Task

1. Create tables to show following one to one (1:1) relationship. Insert at least 5 records in each table. A nurse may be in-charge of a care center. A care center must have one nurse in-charge.

nurse | care_center

Field Name	Data Type
nurse_id	AutoNumber
nurse_name	Short Text
date_of_birth	Date/Time

nurse | care_center

Field Name	Data Type
center_id	AutoNumber
location	Short Text
nurse_incharge	Number
date_assigned	Date/Time

nurse | care_center

nurse_id	nurse_name	date_of_birth
1	Jogii	07/08/2020
2	Heer	29/08/2020
3	Jenna	20/08/2020
4	James	12/08/2020
5	Sara	03/08/2020

nurse | care_center

center_id	location	nurse_incha	date_assign
1	Hyd	1	30/08/2020
2	Jamshoro	2	18/08/2020
3	Karachi	3	05/08/2020
4	Dadu	4	29/08/2020
5	Larkana	5	23/08/2020
(New)		0	

2. **Create a database of University that consists of 03 tables (i.e. Student, Department, Teacher) and select appropriate primary key in each table.**

department | student | teacher | check

dept_id	dept_name	Click to Add
1	CS	
2	ES	
3	EL	
4	TL	
5	SW	
(New)		

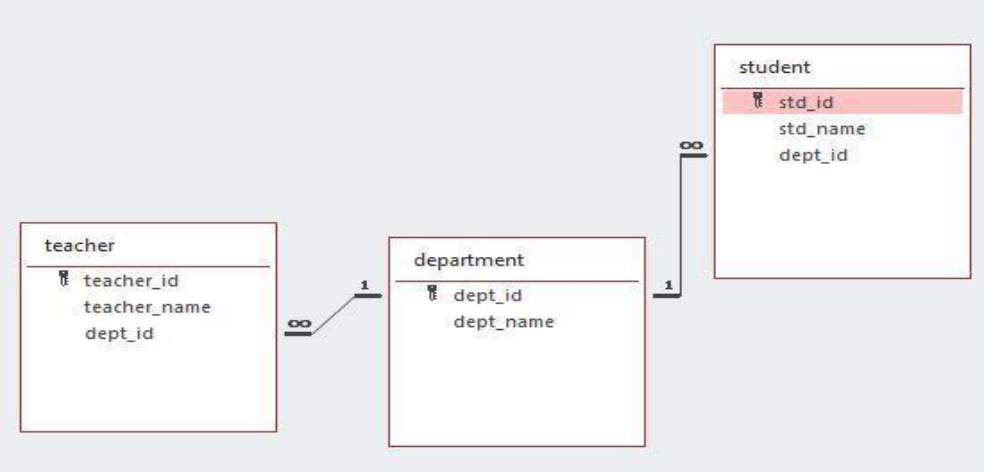
department | student | teacher | chec

teacher_id	teacher_nar	dept_id
1	Sir Rizwan	1
2	Sir Anwar	2
3	Sir Irfan	1
4	Sir Mahveer	1
5	Sir Kareem	3
(New)		0

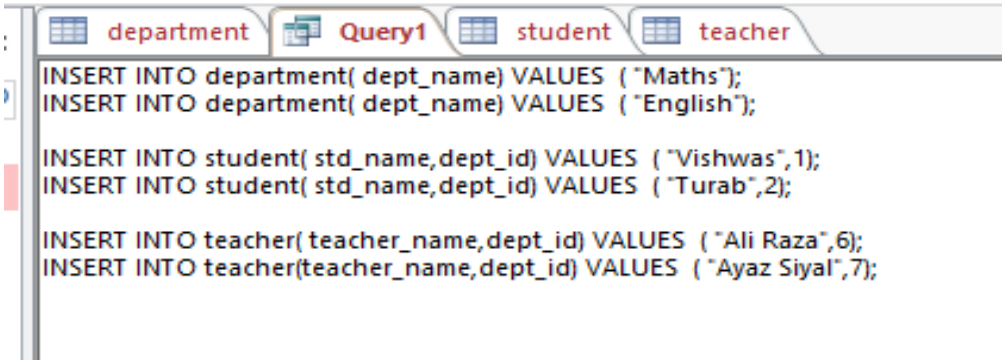
department | student | teacher | chec

std_id	std_name	dept_id
1	Ali	1
2	Akbar	1
3	Ahmed	2
4	Jan	1
5	Sarang	3
(New)		0

3. Create relationship among the three tables.

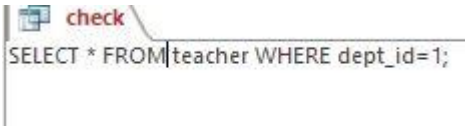


4. Populate the tables with appropriate data.

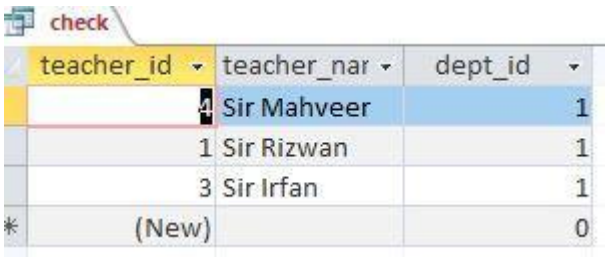


5. Write down a query of TASK#02 database, in which user can find that which teacher is teaching students of Computer System Department.

Query:



Result of Query:



teacher_id	teacher_nar	dept_id
4	Sir Mahveer	1
1	Sir Rizwan	1
3	Sir Irfan	1
(New)		0