**Project Based Learning:**
**Relational Database using Microsoft Access**
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## Project Overview:

In this project you will learn to use Microsoft Access to create a relational database, which is a type of database that has data organized into related tables. This database will include tables that store the most common types of information pertinent to a corporation:
• Employees • Customers • Products • Orders.

## Objectives:

To operate efficiently and to remain competitive, it is essential for a company to manage its data appropriately. Databases enable quick access to critical information; provide secure storage for sensitive data, and offer analysis/reporting tools for real-time decision making. In addition, databases also play an important role with a company's presence on the Internet. Web-based databases have the ability to store information pertaining to customers, employees, competitors, online orders, and buying habits. With this in mind, you realize it is a necessity to integrate a database into your existing IT infrastructure.

## Group size:

Your group can have **maximum of 4 people**. But if you are comfortable doing your project alone, you are welcome to do so.

## Marks distribution:

Your entire project and presentation contains **<u>15 marks</u>** (Project 15 marks + Presentation 5 marks). So be sure to do your project paper sincerely to achieve a good grade. I will be there always if your group need any help. Just ask for a group meeting schedule on my office room or skype.

## Project submission deadline:

Your project submission deadline and presentation day is:
- 22$^{nd}$ December (Tuesday) – For section A
- 23$^{rd}$ December (Wednesday) – For section B

## Requirements of Project paper:

- **Write down project overview**: Write 1 page in brief about the project. What is it all about. What database model are you creating and *__summarize the steps you followed in the whole project__*.
- **Flat file database**: Write down your steps of creating flat file database and also write down any of the difficulties you have faced. *__Provide screenshots and details of your steps__*. Every team member should input at least 15 rows/ tuples.
- **Importing data from an Excel Spreadsheet**: Write down about the process where you will import database you have created in Flat file database state. *__Provide screenshots with details of your steps__* and also mention difficulties you have faced.
- **Creating the database tables**: Here you will create 3 more database tables (Follow the instructions). *__Provide screenshots with details of your steps__* and also mention the difficulties you have faced.
- **Establishing table relationship:** Once you create your four tables with the appropriate number of fields, key fields and field attributes, you must set-up relationships between the tables (Follow the instructions). *__Provide screenshots with details of your steps__* and also mention the difficulties you have faced.
- **Generate a form to input data:** You will create an input form for adding a new customer and another input form for taking new orders. *__Provide screenshots with details of your steps__* and mention the difficulties you have faced.
- **Build Queries to Access data:** You will create two queries. Both queries will extract data from at least two of the tables and sort the resulting information to be displayed. Both queries will also include a formula (follow instructions). *__Provide screenshots with details of your steps__* and mention the difficulties you have faced.
- **Create a report:** You will create one report that collects at least one field of data from three of the tables (follow instructions). *__Provide screenshots with details of your steps__* and mention the difficulties you have faced.
- **Submit the project paper** (Both hard copy and softcopy with ppt) and *__Present the project with your group.__*

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