Assignment part 1

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## Basics of SQL

## MySQL is one of the most popular open-source relational database management systems. It is commonly used for managing large sets of data in various applications ranging from small-scale websites to large enterprise systems.

## Import database and run script to create database

### Option A: Run Script

### A screenshot of a computer

### Option B: Data Import

## 

## Query 1

## A screenshot of a computerPart 1: Select all from Customers on SQL\_store database:

## A screenshot of a computer Description automatically generatedPart 2: order customers by first name:

## Query 2 Select points and create column + 10:

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## TASK 1 Change the points to read times by ten and \* 100

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## TASK 1 – Create a discount factor

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## TASK 2 : show all the products in database and create a new price with 10% increase

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## TASK 3: Find all customers born after Jan 1st, 1990

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## TASK 4: Select the item with most amount in stock

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## TASK 5: Find the most expensive product in stock

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## TASK 6: Find info of the oldest customer

## A screenshot of a computer

# EER Diagrams and relationships

## In SQL, relationship refers to the connection between different tables in a relational database. Keys are used to establish relationships. There are three types of relationships in SQL:

## One to One

## One to Many

## Many to Many

## In One-to-One relationship: Each Row in a Table is related to one row in another Table

## In One to Many relationship: Each row in one table can be related to one or more rows in another table, but the second table is related only to one row in the first table

## In Many to Many relationship: Each row in one table can be related to one or more rows in another table and viceversa.

## To establish relationships between tables we use foreign keys which are columns in one table that refer to the primary key column in another table.

## Primary keys are unique, which means no two rows can have the same value in a column (for example: name\_ID in a table can be the primary key)

## Foreign keys are columns in a child table to establish a relationship between tables. This ensure integrity in a relationship (Example: In Customer table we can have customer\_ID as a primary key which then can be used as Customer\_ID column in another table as a foreign key to link a child table)

A diagram of a company

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# From the screenshots we can see

## Relationships:

Products to Order items = one to many relationship

Orders to Customers = Many to one relationship

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# Primary keys and foreign keys

Customers: Customer\_ID is primary key

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Description automatically generatedIn orders table Customer\_ID is a foreign key