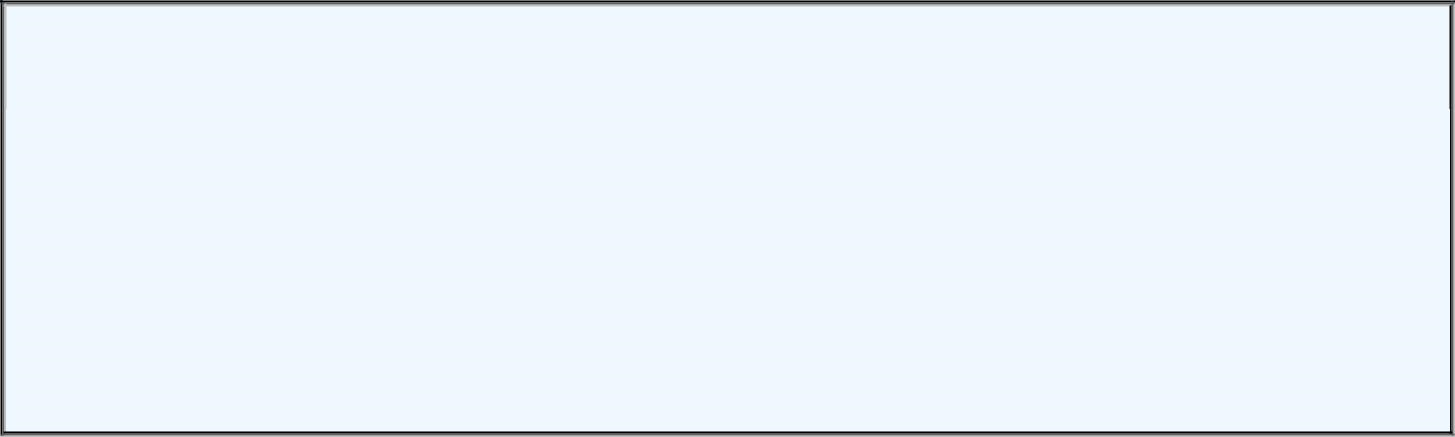
**Assignment**

**CSC371 – Database Systems I**

**Fa24 Term**

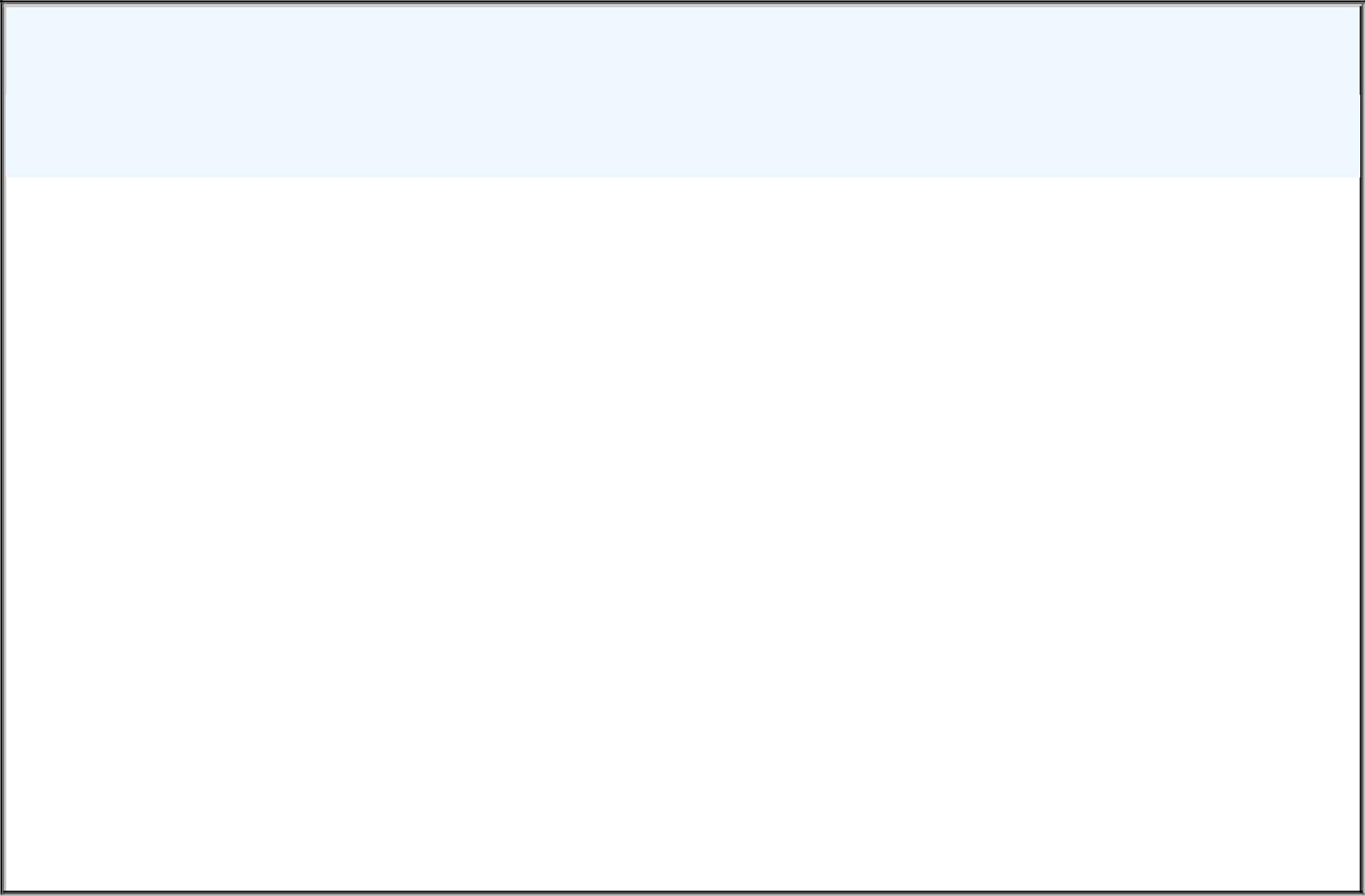
Consider the following table named products:



PRODUCT\_ID PRODUCT\_NAME

|  |  |
| --- | --- |
| 100 | Nokia |
| 200 | IPhone |
| 300 | Samsung |

And another table named sales:



SALE\_ID PRODUCT\_ID YEAR QUANTITY PRICE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | 100 | 2010 | 25 | 5000 |
| 2 | 100 | 2011 | 16 | 5000 |
| 3 | 100 | 2012 | 8 | 5000 |
| 4 | 200 | 2010 | 10 | 9000 |
| 5 | 200 | 2011 | 15 | 9000 |
| 6 | 200 | 2012 | 20 | 9000 |
| 7 | 300 | 2010 | 20 | 7000 |
| 8 | 300 | 2011 | 18 | 7000 |
| 9 | 300 | 2012 | 20 | 7000 |

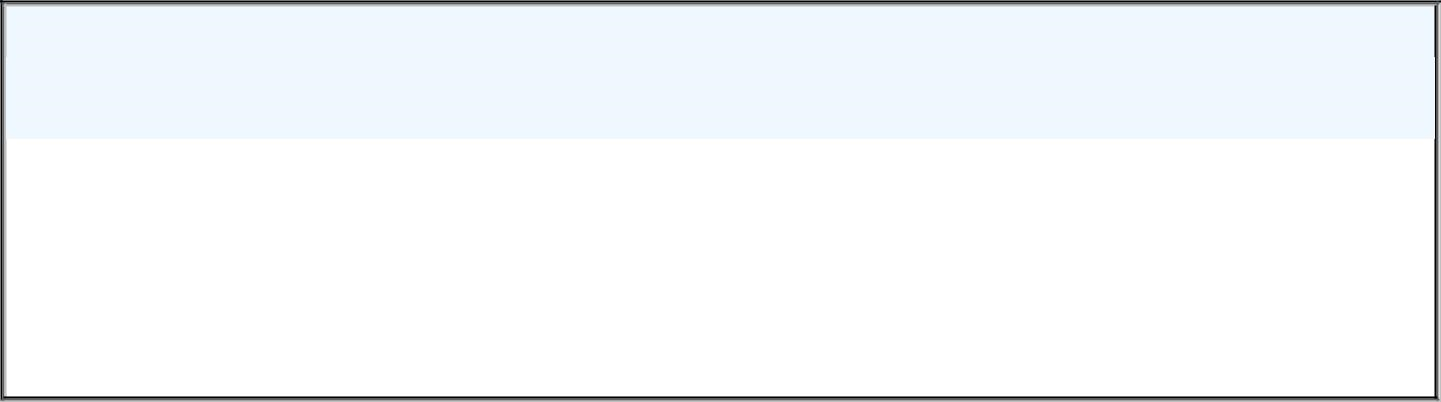
Here Quantity is the number of products sold in each year. Price is the sale price of each product.

Now try to solve the below SQL queries after creating the above table:

1. Write a SQL query to find the products which do not have sales at all?
2. Write a SQL query to find the products whose sales decreased in 2012 compared to 2011?
3. Write a query to select the top product sold in each year?
4. Write a query to find the total sales of each product?
5. Write a SQL query to find the products which have continuous increase in sales every year?
6. Write a query to find the products whose quantity sold in a year should be greater than the average quantity of the product sold across all the years?
7. Write a query to compare the products sales of "IPhone" and "Samsung" in each year? The output should look like as:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2010 | 10 | 20 | 9000 | 7000 |
| 2011 | 15 | 18 | 9000 | 7000 |
| 2012 | 20 | 20 | 9000 | 7000 |

1. Write a query to find the number of products sold in each year?



YEAR IPHONE\_QUANT SAM\_QUANT IPHONE\_PRICE SAM\_PRICE

1. How will you go about identifying duplicate records in a table?