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JAVA

1. Find unique strings in an array of strings?

Input
strArray = {“abc”, “def, “ABZ”, “ASD”, “AbC”};
Similar strings - include case insensitive
output - “abc”, “def”,”ABZ”,”ASD”

ANS:

```
public class Main
{
    public static void main(String[] args)
    {
        String arr[]= {"abc","def","ABZ", "ASD", "Abc"};
        HashMap<String, Integer>hm=new HashMap<>();
        for (String item:arr)
        {
            String q=item.toLowerCase();
            hm.put(q, hm.getOrDefault(q, 0)+1);
        }
        for(String item:arr)
        {
            String r=item.toLowerCase();
            if(hm.get(r)==1)
            {
                System.out.println(item);
            }
```

```
        }
      }
}
```

2. **Write a program in Java to create an abstract class market. There are two methods getPrice() and getProductName() as abstract method.**

```
abstract class Market{
  abstract void getPrice();
  abstract void getProductName();
}
Class Product extends Market{
int Price;
String Name;
public Market(int Price,String Name){
this.Price=Price;
this.Name=Name;
}
public void getPrice(){
System.out.println(this.Price);
}
public void getProductName(){
System.out.println(this.Name);
}
}
```

3. **Write a program in Java to find 2nd largetst number in an array of Strings ?**

```
public class SecondLargest
{
public static int getSecondLargest(int[] a, int total)
{
int temp;
for (int i = 0; i < total; i++)
      {
         for (int j = i + 1; j < total; j++)
         {
            if (a[i] > a[j])
            {
               temp = a[i];
               a[i] = a[j];
               a[j] = temp;
            }
         }
      }
     return a[total-2];
}
public static void main(String args[]){
int a[]={1,2,5,6,3,2};
int b[]={44,66,99,77,33,22,55};
System.out.println("Second Largest: "+getSecondLargest(a,6));
System.out.println("Second Largest: "+getSecondLargest(b,7));
}}
```

4. **Write a program in Java to find pair of numbers whose sum is a number present in an array of integers?**

Example - { 2, 5 ,8 ,9, 0,1, 7 , 10}

Output - (2,5), (9,1) ,(0,1)

```
import java.util.*;
public class sumPairs
   {
   public static void main(String[] args)
   {
      int Sample[] = {2,5,8,9,0,1,7,10};
      for(int i=0;i<Sample.length;i++)
      {
         for(int j=i+1;j<Sample.length;j++)
         {
            for(int k =0;k<Sample.length;k++)
            {
               if(Sample[i]+Sample[j]==Sample[k])
               {
                  System.out.println(Sample[i]+" "+Sample[j]);
               }
            }
         }
      }
   }
}
```

SQL

1. create and execute the sql in the tables(mentioned below)

Tables

Subject (id , rollno, subjectname , marks)

Student (id, rollno, sname, address)

Write a SQL query to find the count of all students studying a paticular subject?

Write a SQL query to find total marks of a particular student for all subjects?

```
CREATE TABLE Subject(
      id VARCHAR(10) PRIMARY KEY,
            rollno INT,
            subname VARCHAR(20),
            marks INT
);

CREATE TABLE Student(
     id VARCHAR(10),
           rollno INT,
           sname VARCHAR(20),
           address VARCHAR(50),
           FOREIGN KEY(id) REFERENCES Subject(id)
);
```

```
INSERT INTO Subject VALUES('A001', 2863, 'Maths', 80);
INSERT INTO Subject VALUES('A002', 2864, 'Physics', 90);
INSERT INTO Subject VALUES('A003', 2865, 'Chemistry', 50);
INSERT INTO Subject VALUES('A004', 2866, 'Biology', 70);
INSERT INTO Subject VALUES('A005', 2867, 'History', 60);
INSERT INTO Student VALUES('A003', 2865, 'Yash', 'bbsr');
INSERT INTO Student VALUES('A004', 2866, 'Aman', 'jsg');
INSERT INTO Student VALUES('A004', 2866, 'Ayush', 'jsr');
INSERT INTO Student VALUES('A001', 2863, 'Harsh', 'sng');

SELECT subname, COUNT(id) AS 'Total Students' FROM Subject
WHERE subname = 'Biology'
GROUP BY subname;

SELECT SUM(marks) AS TotMarks FROM Subject, Student
WHERE Subject.id = Student.id
AND sname = 'Yash';
```

2)

product(id, name , price ,location)

manufacturer(id, company_name, product_id, address)

Write a SQL query to find company_name of a particular product and location given input as product _id?

(Use Join statements)

```
CREATE TABLE Product(
   id INT PRIMARY KEY,
```

```
        name VARCHAR(30),
        price INT,
        location VARCHAR(30)
);

CREATE TABLE manufacturer(
   id INT,
        company_name VARCHAR(30),
        product_id VARCHAR(5),
        address VARCHAR(20),
        FOREIGN KEY(id) REFERENCES Product(id)
);

INSERT INTO Product VALUES(1, 'Yash', 100, 'bbsr');
INSERT INTO Product VALUES(2, 'Aman', 200, 'jsg');
INSERT INTO Product VALUES(3, 'Anurag', 50, 'jsr');
INSERT INTO Product VALUES(4, 'Ayush', 300, 'sng');
INSERT INTO Product VALUES(5, 'Harsh', 70, 'bjr');

INSERT INTO manufacturer VALUES(2, 'Virtusa', 'A01', 'Patna');
INSERT INTO manufacturer VALUES(3, 'Microsoft', 'A02', 'Delhi');
INSERT INTO manufacturer VALUES(3, 'Hexaware', 'A03', 'Chennai');
INSERT INTO manufacturer VALUES(1, 'Informatica', 'A04', 'Banglore');
INSERT INTO manufacturer VALUES(4, 'Meta.net', 'A05', 'Mumbai');

SELECT company_name FROM Product, manufacturer
WHERE Product.id = manufacturer.id
AND product_id = 'A02';
```

HTML

Design an html page with following layout as mentioned below (Include CSS as mentioned in diagram color) include table inside content section

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Assignment</title>
    <style>
        div.container{
        display:grid;
        grid-template-columns:18% 78%;
        grid-gap:10px;
        }

        div.nested-item{
        display:grid;
        grid-template-columns:repeat(1,1fr);
        grid-template-rows: 75px 420px 75px;
        }
```

```
        div.main-section{
        display:grid;
        grid-template-columns:30% 20%;
        grid-gap:10px;
        }

        div.item2{
        background-color:green;
        padding:10px;
        }
        div.item3{
        background-color:skyblue;
        padding:10px;
        }
        div.item4{
        background-color:rgb(169, 205, 50);
        padding:10px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="item1" id="nav" >

            Sign up<br>
          Home<br>
          Product<br>
          Help
```

```
        </div>
        <div class="nested-item">
          <div class="item2" id="header">
            <tr>Site Name</tr>
            <tr >Product_id</tr>
            <tr >Product_name</tr>
            <tr >Location</tr>
          </div>
          <div class="main-section">
            <div class="item3" id="artical">
              CONTENT
            </div>
            <div class="item4" id="ads">

            </div>
          </div>
          <div class="item2" id="footer">
             Footer
          </div>
        </div>
      </div>
</body>
</html>
```