

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"

```
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 largest 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 particular 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', 'khandagiri');
INSERT INTO manufacturer VALUES(3, 'Microsoft', 'A02', 'Patia');
INSERT INTO manufacturer VALUES(3, 'Hexaware', 'A03', 'Udaygiri');
INSERT INTO manufacturer VALUES(1, 'Informatica', 'A04', 'Jagmohan Nagar');
INSERT INTO manufacturer VALUES(4, 'Meta.net', 'A05', 'Bapujinagar');
```

```
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>

```