Questions

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”

Solution:

import java.io.\*;

import java.util.\*;

class Test{

static void findDisStr(List<String> arr, int N)

{

Set<String> DistString = new HashSet<String>();

for(int i = 0; i < N; i++)

{

if (!DistString.contains(arr.get(i)))

{

DistString.add(arr.get(i));

}

}

for(String string : DistString)

{

System.out.print(string + " ");

}

}

public static void main(String[] args)

{

List<String> arr = Arrays.asList(new String[]{“abc”, “def, “ABZ”, “ASD”, “AbC”});

int N = arr.size();

findDisStr(arr, N);

}

}

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

Solution:

import java.util.\*;

abstract class Market {

abstract void getPrice();

abstract void getProductName();

}

class B extends Market {

void getPrice()

{

System.out.println(“price”);

}

void getProductName();

{

System.out.println(“product name”);

}

}

public class Test {

public static void main(String args[])

{

B b = new B();

b.getPrice();

b.getProductName();

}

}

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

Solution:

import java.util.\*;

class Test{

static void printSecondLargest(int arr[],

int arr\_size)

{

int i, first, second;

if (arr\_size < 2)

{

System.out.printf(" Invalid Input ");

return;

}

Arrays.sort(arr);

for (i = arr\_size - 2; i >= 0; i--)

{

if (arr[i] != arr[arr\_size - 1])

{

System.out.printf("The second largest " +

"element is %d\n", arr[i]);

return;

}

}

System.out.printf("There is no second " +

"largest element\n");

}

public static void main(String[] args)

{

String str[] = {12, 35, 1, 10, 34, 1};

String[] string = str.replaceAll("\\[", "").replaceAll("]", "").split(",");

int[] arr = new int[string.length];

for (int i = 0; i < string.length; i++) {

arr[i] = Integer.valueOf(string[i]);

}

int n = arr.length;

printSecondLargest(arr, n);

}

}

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)

Solution:

class Main

{

public static void findPair(int[] nums, int target)

{

for (int i = 0; i < nums.length - 1; i++)

{

for (int j = i + 1; j < nums.length; j++)

{

if (nums[i] + nums[j] == target)

{

System.out.printf("(%d, %d)", nums[i], nums[j]);

return;

}

}

}

}

public static void main (String[] args)

{

int[] nums = { 8, 7, 2, 5, 3, 1 };

for(int i=0; i<nums.length;i++){

findPair(nums, nums[i]);

}

}

}

SQL

2. 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?

Solution:

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)

Solution:

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

Table-1

| product\_id | product\_name | price | location |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |



<!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" />

<link rel="stylesheet" href="task.css" />

<title>TASK 1</title>

<link

rel="stylesheet"

href="https://cdn.jsdelivr.net/npm/bootstrap@4.1.3/dist/css/bootstrap.min.css"

integrity="sha384-MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO"

crossorigin="anonymous"

/>

</head>

<body>

<div class="row">

<div class="col-lg-2" style="background-color: red; border: 1px solid">

<img src="lorem\_img.jpg" alt="img" height="100px" width="200px" />

</div>

<div class="col-lg-10" style="background-color: green; border: 1px solid">

<h1 class="site\_name">XYZ SITE</h1>

</div>

</div>

<div class="row2">

<div

class="col-9"

style="

background-color: aqua;

border: 1px solid;

margin-left: 350px;

height: 500px;

"

>

<h1 class="content">content</h1>

<table>

<tr>

<th>product\_id</th>

<th>product\_name</th>

<th>price</th>

<th>location</th>

</tr>

<tr>

<td>1</td>

<td>A</td>

<td>100</td>

<td>BBSR</td>

</tr>

<tr>

<td>2</td>

<td>B</td>

<td>200</td>

<td>BBSR</td>

</tr>

</table>

</div>

</div>

<div class="row3">

<div

class="col-12"

style="background-color: green; border: 1px solid; height: 60px"

>

<h1 class="footer">Footer</h1>

</div>

</div>

</body>

</html>