

Assignment - I

① Write program to find the factorial value of any number entered by the user. Using Javascript.

input: The first line contains an integer T , the total number of testcases. Then T lines follow, each line contains an integer N .

output: For each test case, display the factorial of the given number N in a new line.

Constraints: $1 \leq T \leq 1000$

$0 \leq N \leq 20$

Example:

Input	Output
-------	--------

3	6
---	---

3	24
---	----

4	120
---	-----

5	
---	--

Ans Factorial of any Number

```
<!doctype html>
```

```
<html>
```

```
<head>
```

```
<script>
```

```
function show() {
```

```
    var i, n, fact;
```

```
    fact=1;
```

```

n = Number(document.getElementById("num").value);
for (i=1; i<=n; i++)
{
    fact = fact * i;
}
document.getElementById("answer").value = fact;
}
</script>
</head>
<body>
Enter Num: <input id="num">
<button onclick="show()">Factorial</button>
<input id="answer">
</body>
</html>

```

output: Enter Num:

② In a company an employee is paid as under:
 if his basic salary is less than Rs. 1500, then
 HRA = 10% of base salary and DA = 90% of basic
 salary. if his salary is either equal to or above
 Rs. 1500, then HRA = Rs. 500 and DA = 98% of basic
 salary. if the Employee's salary is input, write
 a program to find his gross salary. Using Java-
 script Eventhandules.

NOTE: Gross Salary = Basic Salary + HRA + DA.

Input: The first line contains an integer, T,
 total number of testcases. Then follow T lines,
 each line contains an integer salary.

output: For each test case, output the gross salary of the employee in a new line. Your answer will be considered correct if the absolute error is less than 10^{-2} .

constraints: $1 \leq T \leq 1000$

$1 \leq \text{Salary} \leq 100000$

input output

3 2406.00

1203 20383.16

10042 2624

1312

Ans

<html>

<head>

<title> Gross salary </title>

</head>

<body>

<script>

function show() {

var n, ans;

n = Number(document.getElementById("salary").value);

if (n < 1500) {

ans = n + ((10/100) * n) + ((90/100) * n);

}

else {

ans = n + 500 + ((98/100) * n);

}

```
document.getElementById("ans").value = ans;
}
</script>
```

Enter Salary: <input id="salary">

<button onclick='show()> Gross salary </button>

<label id="ans"> 0 </label>

</body>

</html>

output: Enter Salary:

③ Write a program to take a character (C) as input and check whether the given character is a vowel or a constant. Using java.

NOTE: - Vowels are 'A', 'E', 'I', 'O', 'U'. Rest all alphabets are called consonants.

Input: First line will contain the character C

Output: Print "Vowel" if the given character is a vowel, otherwise print "consonant".

constraints: C will be upper case English alphabet.

Sample Input:

Z

Sample Output:

Consonant

O

Vowel

Ans class Char {

Public static void main(String[] args) {

Scanner sc = new Scanner(System.in);


```

char c = sc.next();
if (c == "A" || c == "B" || c == "I" || c == "O" ||
    c == "U") {
    System.out.println("vowel");
} elseif (c == "a" || c == "e" || c == "i" || c == "o" ||
    c == "u") {
    System.out.println("vowel");
} else {
    System.out.println("consonant");
}
}
}

```

Output:

| | |
|---|-----------|
| N | consonant |
| A | vowel. |

Q) Describe in detail Multi threading concept. illustrate with the java code.

Ans Multi threading in java allows concurrent execution of two or more parts of a program for maximum utilization of CPU. Each part of such program is called a thread. So, threads are light weight processes within a process.

program:

```
class MultithreadingDemo Extends Thread {  
    Public void run() {  
        try {  
            System.out.println ("Thread" + Thread.  
                currentThread().getId() + " is running");  
        } catch (Exception e) {  
            System.out.println ("Exception is caught");  
        }  
    }  
}
```

```
Public class Multithread {  
    // Thread 1, 2, 3, 4, 5, 6, 7, 8, 9, 10  
    public static void main(String[] args) {  
        int n=4;  
        for(int i=0; i<n; i++) {  
            MultithreadingDemo Object = new Multithr.  
                eadingDemo();  
            Object.start();  
        }  
    }  
}
```

Output: Thread 4 is running

Thread 5 is running

Thread 6 is running

Thread 7 is running

⑤ Connect to the database using any of the JDBC drivers, insert & display 2 records with Bus ticket reservation information like Ticket No. (8 digit no.), Source, Destination, Date of Journey, Depart no, Arrive On (Time 24 Hr Clock), Seat No., Name, Age.

Ans

```
import java.sql.*;

public class Data {
    public static void main(String[] args) {
        Connection con = null;
        Statement st = null;
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost/bus", "root", "root");
            System.out.println("connection Established");
            st = con.createStatement();
            st.executeUpdate("Insert into booking values (131, 'hyderabad', 'chennai', '2021-01-12', '19:30', 4, 'person 1', 38)");
            st.executeUpdate("Insert into booking values (130, 'vijayawada', 'hyderabad', '2021-01-20', '9:30', 5, 'person 2', 40)");
            ResultSet rs = st.executeQuery("select * from booking");
            while (rs.next()) {
                System.out.println("Ticket no: " + rs.getInt("Ticket number"));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

```

        System.out.println("Source:" + rs.getString("source"));
        System.out.println("Destination:" + rs.getString("destination"));
    }
    con.close();
    st.close();
}
catch (Exception e) {
    e.printStackTrace();
}
}
}

```

Output:

Connection Established

Ticket no: 131

Source : hyderabad

destination: Chennai

Ticket no: 130

Source : vijayawada

destination: hyderabad,