

# Full Stack assignment

# **Software Engineering Assignment**

## **MODULE: 1**

### **SE – Overview of IT Industry**

1. What is software? What is software engineering?
2. Explain types of software
3. What is SDLC? Explain each phase of SDLC
4. What is DFD? Create a DFD diagram on Flipkart
5. What is Flow chart? Create a flowchart to make addition of two numbers
6. What is Use case Diagram? Create a use-case on bill payment on paytm.

## **MODULE: 2**

### **SE – HTML and CSS**

1. Define the terms: Website, Webpage, Web browser, Web server, HTML, CSS
2. Create a webpage to show “This is my first HTML page”
3. Display top 10 IT companies list in html webpage
4. Create a dropdown list
5. Create a Table Of college Management system using row span & colspan.
6. Create below table using HTML table tags

| European Roulette |       |   |      |    |       |    |    |    |       |    |        |    |      |
|-------------------|-------|---|------|----|-------|----|----|----|-------|----|--------|----|------|
| 0                 | 3     | 6 | 9    | 12 | 15    | 18 | 21 | 24 | 27    | 30 | 33     | 36 | 2to1 |
|                   | 2     | 5 | 8    | 11 | 14    | 17 | 20 | 23 | 26    | 29 | 32     | 35 | 2to1 |
|                   | 1     | 4 | 7    | 10 | 13    | 16 | 19 | 22 | 25    | 28 | 31     | 34 | 2to1 |
|                   | 1st12 |   |      |    | 2nd12 |    |    |    | 3rd12 |    |        |    |      |
|                   | 1to18 |   | EVEN |    |       |    |    |    | ODD   |    | 19to36 |    |      |

| CSS3 Browser Support (latest browser versions) |                   |         |        |        |       |
|--|-------------------|---------|--------|--------|-------|
| CSS Property                                   | Internet Explorer | FireFox | Chrome | Safari | Opera |
| Border Radius                                  | YES               | YES     | YES    | YES    | YES   |
| Box Shadow                                     | YES               | YES     | YES    | YES    | YES   |
| CSS Animations                                 | NO                | NO      | YES    | YES    | NO    |

7. Create Registration form using HTML, CSS
8. In how many ways can a CSS be integrated as a web page?
9. Create simple three pages using External CSS, Internal CSS, and Inline CSS.
10. Create below page using HTML CSS

**Individual Registration**

**User Particulars**

\* Login ID

\* Password

\* Confirm Password

**Personal Particulars**

\* Salutation

Select ▼

Middle Name

\* Resident Status

Select ▼

\* Email-Id

\* First Name

\* Last Name

\* Country

Select ▼

\* Mobile Number

**Account Particulars**

\* 15 Digit Account No

\* Fund Transfer

Select ▼

\* Nick Name

**DECLARATION**

I have read, understood and hereby agree to the Terms and Conditions in respect of all products and channels.  
I understand that any changes in the terms and conditions applicable to this relationship would be made available to me on request at any IOB branches. I confirm that all accounts under this login name are operated singly and in case of joint account operated by either or survivor / anyone or survivor(s) under his/her joint name respectively. I do hereby declare that information furnished in this form is true to the best of my knowledge and belief.

submit

Reset

11. Create link-pseudo classes using external css, to format links on the pages.
12. Create a dynamic pseudo class using HTML, CSS

## MODULE: 3

### SE – Fundamentals of Programming

#### Topics Covered

Basic Syntax  
Data Structures  
Variables  
Operators

### Basic Logic Program

1. Display This Information using printf
  - a. Your Name
  - b. Your Birth date
  - c. Your Age
  - d. Your Address
2. Write a program to make Simple calculator (to make addition, subtraction, multiplication, division and modulo)
3. WAP to Find Area And Circumference of Circle
4. Find Area of Square formula :  $a = a^2$
5. Find Area of Cube formula :  $a = 6a^2$
6. Find area of Triangle Formula :  $A = 1/2 \times b \times h$
7. Find area of Rectangle Formula :  $A = wl$
8. Find circumference of Rectangle formula :  $C = 4 * a$
9. Find circumference of Triangle formula :  $triangle = a + b + c$
10. find the area of a rectangular prism formula :  $A = 2(wl + hl + hw)$
11. Find circumference of square formula :  $C = 4 * a$
12. Accept number of students from user. I need to give 5 apples to each student. How many apples are required?
13. Find character value from ascii
14. Find ascii value of given number
15. Convert school's name in abbreviated form

16. Convert country's name in abbreviate form
17. Calculate person's insurance premium based on salary
18. Calculate person's Annual salary
19. Calculate compound interest
20. Accept monthly salary from the user and deduct 10% insurance premium, 10% loan installment find out of remaining salary.
21. Accept 2 numbers from user and swap 2 numbers with using 3<sup>rd</sup> variable and without using 3<sup>rd</sup> variable
22. Calculate compound interest (Compound Interest formula:
  - a. Formula to calculate compound interest annually is given by:  
Amount =  $P(1 + R/100)^t$
  - b. Compound Interest = Amount - P
23. WAP to calculate swap 2 numbers with using of multiplication and division.
24. Accept 5 employees name and salary and count average and total salary
25. Accept 5 expense from user and find average of expense
26. Convert temperature Fahrenheit to Celsius
27. Convert days into months
28. Convert years into days and months
29. Convert minutes into seconds and hours
30. WAP to convert years into days and days into years
31. Convert kilometers into meters
32. Accept 2 numbers and find out its sum check it size
33. C Program to Read Integer and Print First Three Powers ( $N^1$ ,  $N^2$ ,  $N^3$ )

### Topics Covered

**Control statements**

**Conditional Statements**

## Conditional Logic Programs:

1. Write a C program to accept two integers and check whether they are equal or not
2. Write a C program to read the value of an integer m and display the value of n is 1 when m is larger than 0, 0 when m is 0 and -1 when m is less than 0
3. WAP to check if the given year is a leap year or not.
4. WAP to make simple calculator (operation include Addition, Subtraction, Multiplication, Division, modulo) using conditional statement
5. Check Number Is Positive or Negative
6. Find the Character Is Vowel or Not
7. Accept marks from user and check pass or fail

8. WAP to accept the height of a person in centimeters and categorize the person according to their height.
9. C Program to Check Uppercase or Lowercase or Digit or Special Character
- 10.WAP to check whether a number is negative, positive or zero.
- 11.WAP to find number is even or odd using ternary operator
- 12.WAP to find maximum number among 3 numbers using ternary operator
- 13.WAP to find minimum number among 3 numbers using ternary operator
- 14.WAP to find the largest of three numbers.
15. Write a C program to determine eligibility for admission to a professional course based on the following criteria  
 Eligibility Criteria : Marks in Maths  $\geq 65$  and Marks in Phy  $\geq 55$  and Marks in Chem  $\geq 50$  and Total in all three subject  $\geq 190$  or Total in Maths and Physics  $\geq 140$  -----Input the marks obtained in Physics :65 Input the marks obtained in Chemistry :51 Input the marks obtained in Mathematics :72 Total marks of Maths, Physics and Chemistry : 188 Total marks of Maths and Physics : 137 The candidate is not eligible.
16. Write a C program to read temperature in centigrade and display a suitable message according to the temperature state below:  
 Temp  $< 0$  then Freezing weather  
 Temp 0-10 then Very Cold weather  
 Temp 10-20 then Cold weather  
 Temp 20-30 then Normal in Temp  
 Temp 30-40 then Its Hot  
 Temp  $\geq 40$  then Its Very Hot
17. Write a C program to check whether a triangle can be formed with the given values for the angles.
18. Write a C program to calculate profit and loss on a transaction.
19. Write a program in C to calculate and print the electricity bill of a given customer. The customer ID, name, and unit consumed by the user should be captured from the keyboard to display the total amount to be paid to the customer. The charge are as follow :

| 20. Unit                            | 21. Charge/unit |
|-------------------------------------|-----------------|
| 22. upto 350                        | 23. @1.20       |
| 24. 350 and above but less than 600 | 25. @1.50       |
| 26. 600 and above but less than 800 | 27. @1.80       |
| 28. 800 and above                   | 29. @2.00       |

30. If bill exceeds Rs. 800 then a surcharge of 18% will be charged and the minimum bill should be of Rs. 256/-
31. Write a program in C to read any Month Number in integer and display the number of days for this month.
32. Write a C program to input basic salary of an employee and calculate its Gross salary according to following:  
Basic Salary  $\leq$  10000 : HRA = 20%, DA = 80%  
Basic Salary  $\leq$  20000 : HRA = 25%, DA = 90%  
Basic Salary  $>$  20000 : HRA = 30%, DA = 95%
33. WAP to input the week number and print week day.
34. Accept month number and display month name
35. Accept the input month number and print number of days in that month.
36. Write a C program to input electricity unit charges and calculate total electricity bill according to the given condition:  
For first 50 units Rs. 0.50/unit  
For next 100 units Rs. 0.75/unit  
For next 100 units Rs. 1.20/unit  
For unit above 250 Rs. 1.50/unit  
An additional surcharge of 20% is added to the bill
37. WAP to show
- Monday to Sunday using switch case
  - Vowel or Consonant using switch case

### Topics Covered

#### Looping Statements

#### Conditional Statements

- WAP to print 972 to 897 using for loop
- WAP to accept 5 numbers from user and display all numbers
- WAP to take 10 no. Input from user find out below values
  - How many Even numbers are there
  - How many odd numbers are there
  - Sum of even numbers
  - Sum of odd numbers
- WAP to print table up to given numbers



5. WAP to print factorial of given number
6. WAP to print Fibonacci series up to given numbers
7. WAP to print number in reverse order e.g.: number = 64728 ---> reverse = 82746
8. Write a program to find out the max from given number (E.g., No: -1562 Max number is 6)
9. Write a program make a summation of given number (E.g., 1523 Ans: -11)
10. Write a program you have to make a summation of first and last Digit. (E.g., 1234 Ans: -5)
11. Accept 5 names from user at run time.
12. Program of Armstrong Number in C Using For Loop & While Loop
13. calculate the Factorial of a Given Number using while loop
14. Accept 5 numbers from user and find those numbers factorials
15. Calculate sum of 10 numbers using of while loop
16. Calculate the Sum of Natural Numbers Using the While Loop
17. Calculate 5 numbers from user and calculate number of even and odd using of while loop
18. Write a C Program to Print the Multiplication Table of N
  - i. E.g.  $5 * 1 = 5$
  - ii.  $5 * 2 = 10$ 
    1. .
    2. .
  - iii.  $5 * 10 = 50$
19. Patterns:

|           |           |             |           |
|-----------|-----------|-------------|-----------|
| 1         | A         | *           | *         |
| 1 0       | B C       | * * *       | * *       |
| 1 0 1     | D E F     | * * * * *   | * * *     |
| 1 0 1 0   | G H I J   | * * * * * * | * * * *   |
| 1 0 1 0 1 | K L M N O | * * * * * * | * * * * * |
|           |           |             | * * * * * |
|           |           |             | * * * * * |
|           |           |             | * * * *   |
|           |           |             | * *       |
|           |           |             | *         |

|                |           |  |
|----------------|-----------|--|
| 1              | A         |  |
| 2 3            | A B       |  |
| 4 5 6          | A B C     |  |
| 7 8 9 10       | A B C D   |  |
| 11 12 13 14 15 | A B C D E |  |

|    |    |    |    |     |    |    |    |    |    |
|----|----|----|----|-----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5   | 6  | 7  | 8  | 9  | 10 |
| 36 | 37 | 38 | 39 | 40  | 41 | 42 | 43 | 44 | 11 |
| 35 | 64 | 65 | 66 | 67  | 68 | 69 | 70 | 45 | 12 |
| 34 | 63 | 84 | 85 | 86  | 87 | 88 | 71 | 46 | 13 |
| 33 | 62 | 83 | 96 | 97  | 98 | 89 | 72 | 47 | 14 |
| 32 | 61 | 82 | 95 | 100 | 99 | 90 | 73 | 48 | 15 |
| 31 | 60 | 81 | 94 | 93  | 92 | 91 | 74 | 49 | 16 |
| 30 | 59 | 80 | 79 | 78  | 77 | 76 | 75 | 50 | 17 |
| 29 | 58 | 57 | 56 | 55  | 54 | 53 | 52 | 51 | 18 |
| 28 | 27 | 26 | 25 | 24  | 23 | 22 | 21 | 20 | 19 |

20. WAP program to print below output using for loop

```
01 02 03 04 05 06 07 08 09 10
11 12 13 14 15 16 17 18 19 20
.....
.....
41 42 43 44 45 46 47 48 49 50
```

22. Accept 3 numbers from user using while loop and check each numbers palindrome

23. C Program to Reverse a Number Using FOR Loop

Series Program:

24.  $1 + 2 + 3 + 4 + 5 + \dots + n$

25.  $(1*1) + (2*2) + (3*3) + (4*4) + (5*5) + \dots + (n*n)$

26.  $(1) + (1+2) + (1+2+3) + (1+2+3+4) + \dots + (1+2+3+4+\dots+n)$

27.  $1/2 - 2/3 + 3/4 - 4/5 + 5/6 \dots n$

28. 1 2 3 6 9 18 27 54...

### Topics Covered

**Function**

**Array**

1. Write a program to find out the max number from given array using function
2. WAP of Addition, Subtraction, Multiplication and Division using Switch case.(Must Be Menu Driven)
3. WAP to find reverse of string using recursion
4. WAP to find factorial using recursion
5. WAP to take two Array input from user and sort them in ascending or descending order as per user's choice

6. WAP to make addition, Subtraction and multiplication of two matrix using 2-D Array
7. WAP Find out length of string without using inbuilt function
8. WAP to reverse a string and check that the string is palindrome or not  
Write a program of structure employee that provides the following
  - a. information -print and display empno, empname, address and age
  - b. Write a program of structure for five employee that provides the following information -print and display empno, empname, address and age
9. WAP to show difference between Structure and Union.
10. WAP to perform Palindrome number using for loop and function
11. WAP to accept 5 numbers from user and display in reverse order using for loop and array
12. WAP to accept 5 students name and store it in array
13. WAP to accept 5 numbers from user and check entered number is even or odd using of array
14. Perform 2D matrix array
15. Store 5 numbers in array and sort it in ascending order
16. Accept 5 numbers from user and perform sum of array
17. WAP to show difference between Structure and Union.

### Topics Covered

#### String

1. Write a program in C to find the length of a string without using library functions.
2. Write a program in C to separate individual characters from a string.
3. Write a program in C to print individual characters of a string in reverse order
4. Write a program in C to count the total number of words in a string.
5. Write a program in C to compare two strings without using string library functions.
6. Write a program in C to count the total number of alphabets, digits and special characters in a string.
7. Write a program in C to copy one string to another string.

8. Write a program in C to count the total number of vowels or consonants in a string.
9. Write a program in C to find the maximum number of characters in a string.
10. Write a program in C to extract a substring from a given string
11. Write a program in C to read a sentence and replace lowercase characters with uppercase and vice versa.
12. Write a program in C to find the number of times a given word 'is' appears in the given string.
13. Write a program in C to remove characters from a string except alphabets.
14. Write a program in C to combine two strings manually
15. Write a program in C to find the largest and smallest words in a string.

## **MODULE: 4**

### **OOPS Concept**

#### **Topics Covered**

##### **Basic Concepts of OOP**

1. WAP to print “Hello World” using C++
2. What is OOP? List OOP concepts
3. What is the difference between OOP and POP?

#### **Topics Covered**

##### **Basic Concepts of OOP**

1. WAP to create simple calculator using class
2. Define a class to represent a bank account. Include the following members:
3. Data Member:

- Name of the depositor
- Account Number
- Type of Account
- Balance amount in the account

### **Member Functions**

- To assign values
- To deposited an amount
- To withdraw an amount after checking balance
- To display name and balance

4. Write a C++ program to implement a class called Circle that has private member variables for radius. Include member functions to calculate the circle's area and circumference.
5. Write a C++ program to create a class called Rectangle that has private member variables for length and width. Implement member functions to calculate the rectangle's area and perimeter.
6. Write a C++ program to create a class called Person that has private member variables for name, age and country. Implement member functions to set and get the values of these variables.

### **Topics Covered**

**Constructor**

**Destructor**

**Encapsulation**

**Abstraction**

1. Write a program to find the multiplication values and the cubic values using inline function
2. Write a program of Addition, Subtraction, Division, Multiplication using constructor.
3. Write a C++ program to create a class called Car that has private member variables for company, model, and year. Implement member functions to get and set these variables.
4. Write a C++ program to implement a class called Bank Account that has private member variables for account number and balance. Include member functions to deposit and withdraw money from the account.
5. Write a C++ program to create a class called Triangle that has private member variables for the lengths of its three sides. Implement member functions to determine if the triangle is equilateral, isosceles, or scalene.
6. Write a C++ program to implement a class called Employee that has private member variables for name, employee ID, and salary. Include member functions to calculate and set salary based on employee performance. Using of constructor
7. Write a C++ program to implement a class called Date that has private member variables for day, month, and year. Include member functions to set and get these variables, as well as to validate if the date is valid.
8. Write a C++ program to implement a class called Student that has private member variables for name, class, roll number, and marks. Include member functions to calculate the grade based on the marks and display the student's information. Accept address from each student implement using of aggregation

## Topics Covered

### Inheritance

### Polymorphism

1. Assume a class cricketer is declared. Declare a derived class batsman from cricketer. Data member of batsman. Total runs, Average runs and best performance. Member functions input data, calculate average runs, Display data. (Single Inheritance)
2. Write a C++ Program to find Area of Rectangle using inheritance
3. Create a class person having members name and age. Derive a class student having member percentage. Derive another class teacher having member salary. Write necessary member function to initialize, read and write data. Write also Main function (Multiple Inheritance)
4. Write a C++ Program display Student Mark sheet using Multiple inheritance
5. Assume that the test results of a batch of students are stored in three different classes. Class Students are storing the roll number. Class Test stores the marks obtained in two subjects and class result contains the total marks obtained in the test. The class result can inherit the details of the marks obtained in the test and roll number of students. (Multilevel Inheritance)
6. Write a C++ Program to show access to Private Public and Protected using Inheritance
7. Write a C++ Program to illustrates the use of Constructors in multilevel inheritance
8. Write a program to Mathematic operation like Addition, Subtraction, Multiplication, Division Of two number using different parameters and Function Overloading
9. Write a Program of Two 1D Matrix Addition using Operator Overloading
10. Write a program to concatenate the two strings using Operator Overloading
11. Write a program to calculate the area of circle, rectangle and triangle using Function Overloading  
Rectangle: Area \* breadth  
Triangle:  $\frac{1}{2}$  \* Area \* breadth  
Circle: Pi \* Area \* Area

12. Write a program to swap the two numbers using friend function without using third variable
13. Write a program to find the max number from given two numbers using friend function

- **Topics Covered**

**Templates**

1. Write a program of to swap the two values using template
2. Write a program of to sort the array using templates

## **MODULE: 5 (Database)**

- **Topics Covered**

**Basics of Database**

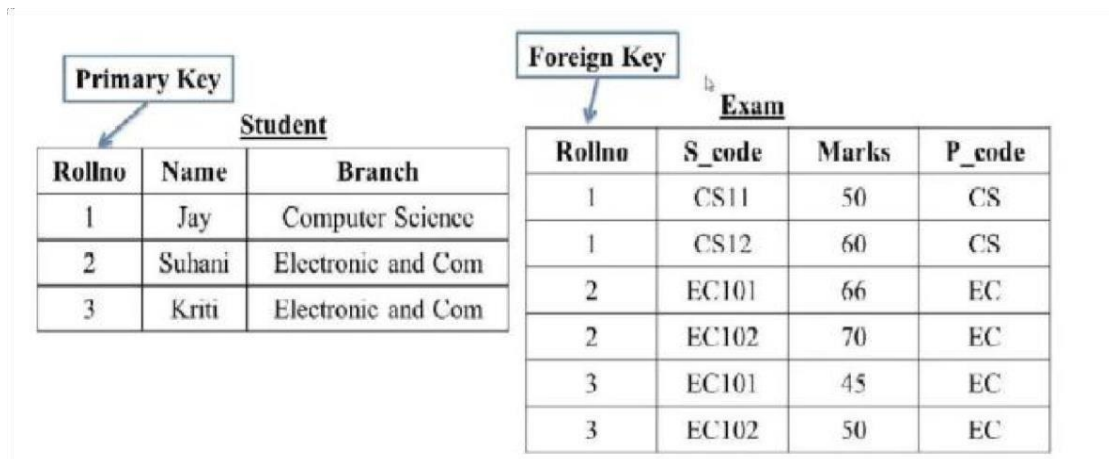
1. What do you understand By Database
2. What is Normalization?
3. What is Difference between DBMS and RDBMS?
4. What is MF Cod Rule of RDBMS Systems?
5. What do you understand By Data Redundancy?
6. What is DDL Interpreter?
7. What is DML Compiler in SQL?
8. What is SQL Key Constraints writing an Example of SQL Key Constraints
9. What is save Point? How to create a save Point write a Query?
10. What is trigger and how to create a Trigger in SQL?



## Topics Covered

### SQL Queries

#### 1. Create Table Name : Student and Exam



2. Create table given below: Employee and Incentive Table

| Employee_id | First_name | Last_name | Salary  | Joining_date                | Department |
|-------------|------------|-----------|---------|-----------------------------|------------|
| 1           | John       | Abraham   | 1000000 | 01-JAN-13<br>12.00.00<br>AM | Banking    |
| 2           | Michael    | Clarke    | 800000  | 01-JAN-13<br>12.00.00<br>AM | Insurance  |
| 3           | Roy        | Thomas    | 700000  | 01-FEB-13<br>12.00.00<br>AM | Banking    |
| 4           | Tom        | Jose      | 600000  | 01-FEB-13<br>12.00.00<br>AM | Insurance  |
| 5           | Jerry      | Pinto     | 650000  | 01-FEB-13<br>12.00.00<br>AM | Insurance  |
| 6           | Philip     | Mathew    | 750000  | 01-JAN-13<br>12.00.00<br>AM | Services   |
| 7           | TestName1  | 123       | 650000  | 01-JAN-13<br>12.00.00<br>AM | Services   |
| 8           | TestName2  | Lname%    | 600000  | 01-FEB-13<br>12.00.00<br>AM | Insurance  |

Name: Employee

Table Name: Incentive

| Employee_ref_id | Incentive_date | Incentive_amount |
|-----------------|----------------|------------------|
| 1               | 01-FEB-13      | 5000             |
| 2               | 01-FEB-13      | 3000             |
| 3               | 01-FEB-13      | 4000             |
| 1               | 01-JAN-13      | 4500             |
| 2               | 01-JAN-13      | 3500             |

3. Get First\_Name from employee table using Tom name “Employee Name”.
4. Get FIRST\_NAME, Joining Date, and Salary from employee table.
5. Get all employee details from the employee table order by First\_Name

Ascending and Salary descending?

6. Get employee details from employee table whose first name contains 'J'.
7. Get department wise maximum salary from employee table order by
8. salaryascending?
9. Select first\_name, incentive amount from employee and incentives table forthose employees who have incentives and incentive amount greater than 3000
10. Create After Insert trigger on Employee table which insert records in viewtable
11. Create table given below: Salesperson and Customer

TABLE-1

TABLE NAME- SALSEPERSON

| (PK)SNo | SNAME   | CITY      | COMM |
|---------|---------|-----------|------|
| 1001    | Peel    | London    | .12  |
| 1002    | Serres  | San Jose  | .13  |
| 1004    | Motika  | London    | .11  |
| 1007    | Rafkin  | Barcelona | .15  |
| 1003    | Axelrod | New York  | .1   |

TABLE-2

TABLE NAME- CUSTOMER

| (PK)CNM. | CNAME    | CITY      | RATING | (FK)SNo |
|----------|----------|-----------|--------|---------|
| 201      | Hoffman  | London    | 100    | 1001    |
| 202      | Giovanne | Roe       | 200    | 1003    |
| 203      | Liu      | San Jose  | 300    | 1002    |
| 204      | Grass    | Barcelona | 100    | 1002    |
| 206      | Clemens  | London    | 300    | 1007    |
| 207      | Pereira  | Roe       | 100    | 1004    |

12. Retrieve the below data from above table
13. All orders for more than \$1000.
14. Names and cities of all salespeople in London with commission above 0.12
15. All salespeople either in Barcelona or in London
16. All salespeople with commission between 0.10 and 0.12. (Boundary

values should be excluded).

17. All customers excluding those with rating  $\leq 100$  unless they are located in Rome

18. Write a SQL statement that displays all the information about all salespeople

| salesman_id | name       | city     | commission |
|-------------|------------|----------|------------|
| 5001        | James Hoog | New York | 0.15       |
| 5002        | Nail Knite | Paris    | 0.13       |
| 5005        | Pit Alex   | London   | 0.11       |
| 5006        | Mc Lyon    | Paris    | 0.14       |
| 5007        | Paul Adam  | Rome     | 0.13       |
| 5003        | Lauson Hen | San Jose | 0.12       |

19. From the following table, write a SQL query to find orders that are delivered by a salesperson with ID. 5001. Return ord\_no, ord\_date, purch\_amt.

*Sample table: orders*

| ord_no | purch_amt | ord_date   | customer_id | salesman_id |
|--------|-----------|------------|-------------|-------------|
| 70001  | 150.5     | 2012-10-05 | 3005        | 5002        |
| 70009  | 270.65    | 2012-09-10 | 3001        | 5005        |
| 70002  | 65.26     | 2012-10-05 | 3002        | 5001        |
| 70004  | 110.5     | 2012-08-17 | 3009        | 5003        |
| 70007  | 948.5     | 2012-09-10 | 3005        | 5002        |
| 70005  | 2400.6    | 2012-07-27 | 3007        | 5001        |
| 70008  | 5760      | 2012-09-10 | 3002        | 5001        |
| 70010  | 1983.43   | 2012-10-10 | 3004        | 5006        |
| 70003  | 2480.4    | 2012-10-10 | 3009        | 5003        |
| 70012  | 250.45    | 2012-06-27 | 3008        | 5002        |
| 70011  | 75.29     | 2012-08-17 | 3003        | 5007        |
| 70013  | 3045.6    | 2012-04-25 | 3002        | 5001        |

20. From the following table, write a SQL query to select a range of products whose price is in the range Rs.200 to Rs.600. Begin and end values are included. Return pro\_id, pro\_name, pro\_price, and pro\_com.

*Sample table:* item\_mast

| PRO_ID | PRO_NAME         | PRO_PRICE | PRO_COM |
|--------|------------------|-----------|---------|
| 101    | Mother Board     | 3200.00   | 15      |
| 102    | Key Board        | 450.00    | 16      |
| 103    | ZIP drive        | 250.00    | 14      |
| 104    | Speaker          | 550.00    | 16      |
| 105    | Monitor          | 5000.00   | 11      |
| 106    | DVD drive        | 900.00    | 12      |
| 107    | CD drive         | 800.00    | 12      |
| 108    | Printer          | 2600.00   | 13      |
| 109    | Refill cartridge | 350.00    | 13      |
| 110    | Mouse            | 250.00    | 12      |

21. From the following table, write a SQL query to calculate the average price for a manufacturer code of 16. Return avg.

*Sample table:* item\_mast

| PRO_ID | PRO_NAME         | PRO_PRICE | PRO_COM |
|--------|------------------|-----------|---------|
| 101    | Mother Board     | 3200.00   | 15      |
| 102    | Key Board        | 450.00    | 16      |
| 103    | ZIP drive        | 250.00    | 14      |
| 104    | Speaker          | 550.00    | 16      |
| 105    | Monitor          | 5000.00   | 11      |
| 106    | DVD drive        | 900.00    | 12      |
| 107    | CD drive         | 800.00    | 12      |
| 108    | Printer          | 2600.00   | 13      |
| 109    | Refill cartridge | 350.00    | 13      |
| 110    | Mouse            | 250.00    | 12      |

22. From the following table, write a SQL query to display the pro\_name as 'Item Name' and pro\_price as 'Price in Rs.'

*Sample table:* item\_mast

| PRO_ID | PRO_NAME         | PRO_PRICE | PRO_COM |
|--------|------------------|-----------|---------|
| 101    | Mother Board     | 3200.00   | 15      |
| 102    | Key Board        | 450.00    | 16      |
| 103    | ZIP drive        | 250.00    | 14      |
| 104    | Speaker          | 550.00    | 16      |
| 105    | Monitor          | 5000.00   | 11      |
| 106    | DVD drive        | 900.00    | 12      |
| 107    | CD drive         | 800.00    | 12      |
| 108    | Printer          | 2600.00   | 13      |
| 109    | Refill cartridge | 350.00    | 13      |
| 110    | Mouse            | 250.00    | 12      |

23. From the following table, write a SQL query to find the items whose prices are higher than or equal to \$250. Order the result by product price in descending, then product name in ascending. Return pro\_name and pro\_price.

*Sample table:* item\_mast

| PRO_ID | PRO_NAME         | PRO_PRICE | PRO_COM |
|--------|------------------|-----------|---------|
| 101    | Mother Board     | 3200.00   | 15      |
| 102    | Key Board        | 450.00    | 16      |
| 103    | ZIP drive        | 250.00    | 14      |
| 104    | Speaker          | 550.00    | 16      |
| 105    | Monitor          | 5000.00   | 11      |
| 106    | DVD drive        | 900.00    | 12      |
| 107    | CD drive         | 800.00    | 12      |
| 108    | Printer          | 2600.00   | 13      |
| 109    | Refill cartridge | 350.00    | 13      |
| 110    | Mouse            | 250.00    | 12      |

24. From the following table, write a SQL query to calculate average price of the items for each company. Return average price and companycode.

*Sample table: item\_mast*

| PRO_ID | PRO_NAME         | PRO_PRICE | PRO_COM |
|--------|------------------|-----------|---------|
| 101    | Mother Board     | 3200.00   | 15      |
| 102    | Key Board        | 450.00    | 16      |
| 103    | ZIP drive        | 250.00    | 14      |
| 104    | Speaker          | 550.00    | 16      |
| 105    | Monitor          | 5000.00   | 11      |
| 106    | DVD drive        | 900.00    | 12      |
| 107    | CD drive         | 800.00    | 12      |
| 108    | Printer          | 2600.00   | 13      |
| 109    | Refill cartridge | 350.00    | 13      |
| 110    | Mouse            | 250.00    | 12      |

# Web Designing Assignment

## Term-1

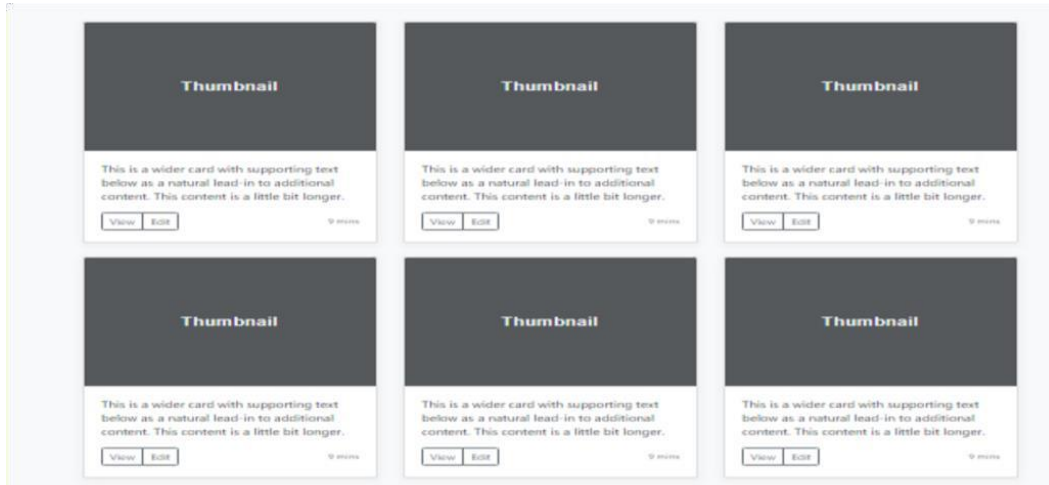
### Module (HTML) -1

- Are the HTML tags and elements the same thing?
- What are tags and attributes in HTML?
- What are void elements in HTML?
- What are HTML Entities?
- What are different types of lists in HTML?
- What is the 'class' attribute in HTML?
- What is the difference between the 'id' attribute and the 'class' attribute of HTML elements?
- What are the various formatting tags in HTML?
- How is Cell Padding different from Cell Spacing?
- How can we club two or more rows or columns into a single row or column in an HTML table?
- What is the difference between a block-level element and an inline element?
- How to create a Hyperlink in HTML?
- What is the use of an iframe tag?
- What is the use of a span tag? Explain with example?
- How to insert a picture into a background image of a web page?
- How are active links different from normal links?
- What are the different tags to separate sections of text?
- What is SVG?
- What is difference between HTML and XHTML?
- What are logical and physical tags in HTML?



## **Module (CSS and CSS 3) -2**

- What are the benefits of using CSS?
- What are the disadvantages of CSS?
- What is the difference between CSS2 and CSS3?
- Name a few CSS style components
- What do you understand by CSS opacity?
- How can the background color of an element be changed?
- How can image repetition of the backup be controlled?
- What is the use of the background-position property?
- Which property controls the image scroll in the background?
- Why should background and color be used as separate properties?
- How to center block elements using CSS1?
- How to maintain the CSS specifications?
- What are the ways to integrate CSS as a web page?
- What is embedded style sheets?
- What are the external style sheets?
- What are the advantages and disadvantages of using external style sheets?
- What is the meaning of the CSS selector?
- What are the media types allowed by CSS?
- What is the rule set?
- Create Layouts



## **Module (HTML5) – 3**

- What are the new tags added in HTML5?
- How to embed audio and video in a webpage?
- Semantic element in HTML5?
- Canvas and SVG tags

## **Module (JAVASCRIPT BASIC & DOM) – 4**

- What is JavaScript?
- What is the use of isNaN function?
- What is negative Infinity?

- Which company developed JavaScript?
- What are undeclared and undefined variables?
- Write the code for adding new elements dynamically?
- What is the difference between ViewState and SessionState?
- What is === operator?
- How can the style/class of an element be changed?
- How to read and write a file using JavaScript?
- What are all the looping structures in JavaScript?
- How can you convert the string of any base to an integer in JavaScript?
- What is the function of the delete operator?
- What are all the types of Pop up boxes available in JavaScript?
- What is the use of Void (0)?
- How can a page be forced to load another page in JavaScript?
- What are the disadvantages of using innerHTML in JavaScript?

## **Module (jQuery Basic, Effects & Advanced) – 5**

- What is jQuery?
- How to Apply CSS Using JQuery, How to Add Class and Remove Class in JQuery , JQuery Animation?
- How to create slider with animation?

## **Module (Bootstrap Basic & Advanced) – 6**

- What are the advantages of Bootstrap?
- What is a Bootstrap Container, and how does it work?

- What are the default Bootstrap text settings?
- What do you know about the Bootstrap Grid System?
- What is the difference between Bootstrap 4 and Bootstrap 5
- What is a Button Group, and what is the class for a basic Button Group?
- How can you use Bootstrap to make thumbnails?
- In Bootstrap 4, what is flexbox?
- How can one create an alert in Bootstrap?
- What is a bootstrap card and how would you create one?

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# Advance JavaScript

## MODULE: 1 (Introduction and Code Quality)

- Write a program to Show an alert
- What will be the result for these expressions?

1. `5 > 4`
2. `"apple" > "pineapple"`
3. `"2" > "12"`
4. `undefined == null`
5. `undefined === null`
6. `null == "\n0\n"`
7. `7. null === +"\n0\n"`

- Will alert be shown?

```
if ("0") { alert( 'Hello'); }
```

- What is the code below going to output? `alert( null || 2 || undefined );`
- The following function returns true if the parameter age is greater than 18. Otherwise it asks for a confirmation and returns its result:

```
function  
checkAge(age)  
{  
  
    if (age > 18) { return true; }  
  
    else {  
        // ...return confirm ('did parents allow you?');  
    }  
}
```

- Replace Function Expressions with arrow functions in the code below:

Function

```
ask(question, yes, no)
```

```
{ if (confirm(question))yes();  
    else  
    no();  
}  
ask("Do you agree?", function()  
{ alert("You agreed."); },  
function() {  
    alert("You canceled the execution."); }  
}
```

## MODULE: 2 (Data Types and Objects)

- Write the code, one line for each action:

- a) Create an empty object user.
- b) Add the property name with the value John.
- c) Add the property surname with the value Smith.
- d) Change the value of the name to Pete.
- e) Remove the property name from the object.

- Is array copied?

```
let fruits = ["Apples", "Pear", "Orange"]; // push a new value into the "copy" let  
shoppingCart = fruits; shoppingCart.push("Banana"); // what's in fruits?
```

```
alert( fruits.length ); // ?
```

- Map to names

```
let john = { name: "John", age: 25 }; let pete = { name: "Pete", age: 30 }; let mary =  
{ name: "Mary", age: 28 }; let users = [ john, pete, mary ]; let names = /* ... your  
code */ alert( names ); // John, Pete, Mary
```

- Map to objects

```
let john = { name: "John", surname: "Smith", id: 1 }; let pete = { name: "Pete",  
surname: "Hunt", id: 2 }; let mary = { name: "Mary", surname: "Key", id: 3 }; let  
users = [ john, pete, mary ]; let usersMapped = /* ... your code ... */
```

```
/*
```

```
usersMapped = [
```

```
  { fullName: "John Smith", id: 1 },
```

```
  { fullName: "Pete Hunt", id: 2 },
```

```
  { fullName: "Mary Key", id: 3 }
```

```
]
```

```
*/ alert( usersMapped[0].id ) // 1 alert( usersMapped[0].fullName ) // John Smith
```

- Sum the properties There is a salaries object with arbitrary number of salaries. Write the function `sumSalaries(salaries)` that returns the sum of all salaries using `Object.values` and the `for..of` loop. If salaries is empty, then the result must be 0.

```
let salaries = {
```

```
  "John": 100,
```

```
  "Pete": 300,
```

```
  "Mary": 250
```

```
};
```

```
alert( sumSalaries(salaries) ); // 650
```

- Destructuring assignment We have an object: Write the Destructuring assignment that reads:
  - a) Name property into the variable name.
  - b) Year's property into the variable age.
  - c) isAdmin property into the variable isAdmin (false, if no such property)
  - d) let user = { name: "John", years: 30};
- Turn the object into JSON and back Turn the user into JSON and then read it back into another variable.

```
user = { name: "John Smith", age: 35};
```

## **MODULE: 3 (Document, Event and Controls)**

- Create a program to hide/show the password
- Create a program that will select all the classes and loop over and whenever i click the button the alert should show
- Create a responsive header using proper JavaScript
- Create a form and validate using JavaScript
- Create a modal box using css and Js with three buttons
- Use external js library to show slider
- Prevent the browser when i click the form submit button

## **MODULE: 4 (New Request)**

- What is JSON
- What is promises
- Write a program of promises and handle that promises also
- Use fetch method for calling an api <https://fakestoreapi.com/products>
- Display all the product from the api in your HTML page





# React Js Assignments

## Module -1

- HTML–CSS Login Registration page

## Module – 2 Advance JavaScript

- Calculate subtotal price of quantity in JavaScript?

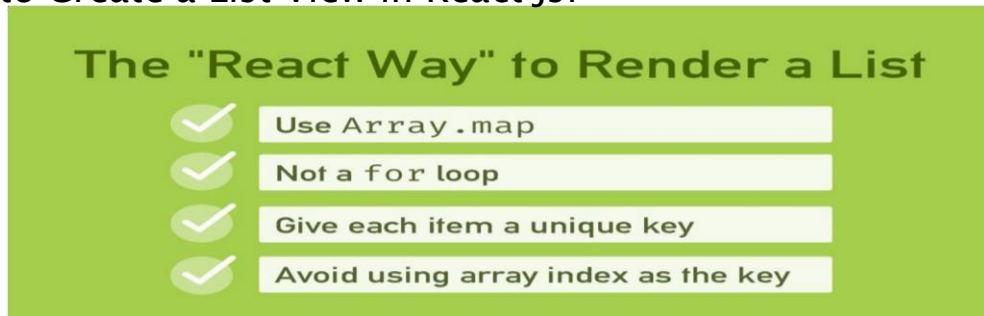
| Product Info  | Quantity                       | Price (per unit) | Price (subtotal) |                         |
|---|--------------------------------|------------------|------------------|-------------------------|
| <br>Fortunata Window Hardware - Decorative Holdbacks - Mocha | <input type="text" value="2"/> | \$29.99          | \$59.98          | <button>Remove</button> |
| <br>Woven Trellis Window Hardware - Clip Rings - Bronze    | <input type="text" value="1"/> | \$12.99          | \$12.99          | <button>Remove</button> |
|   |                                |                  | \$72.97          |                         |

- What is JavaScript Output method?
- How to used JavaScript Output method?
- How to used JavaScript Events to do all examples?

## Module – 3 ReactJs

- What is React Js?
- What is NPM in React Js?
- What is Role of Node Js in react Js?
- What is CLI command In React Js?
- What is Components in React Js?
- What is Header and Content Components in React Js?
- How to install React Js on Windows, linux Operating System? □ How to install NPM and How to check version of NPM?

- How to check version of React Js?
- How to change in components of React Js?
- How to Create a List View in React Js?



- Create Increment decrement state change by button click?

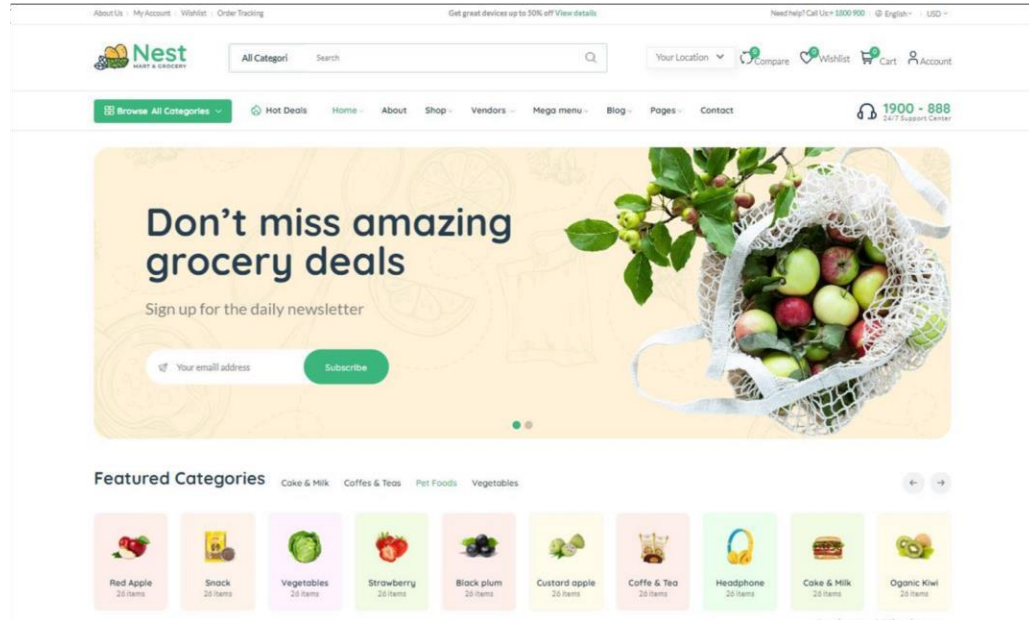


## Module – 4 Lists and Hooks

- Explain Life cycle in Class Component and functional component with Hooks

## Module-5) React - Styling & Advance React

- Create Shopping site home page with Styled- component



## Module 6) React Router

- Create React app with modules and lazy loading (Admin-user module with child router and outlet)

## Module-7) React - Applying Redux

- What is Redux?
- What is Redux Thunk used for?
- What is Pure Component? When to use Pure Component over Component?
- What is the second argument that can optionally be passed to setState and what is its purpose?
- Create a Table and Search data from table using React Js ?

localhost/php-ajax-crud-level-1.5/

Search products: shirt

shirt

| Name                          | Price | Category | Action  |
|-------------------------------|-------|----------|---|
| Amanda Waller Shirt Men       | \$333 | Fashion  | <input type="button" value="Read"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| Abercrombie Allen Brook Shirt | \$70  | Fashion  | <input type="button" value="Read"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| Abercrombie Lake Arnold Shirt | \$60  | Fashion  | <input type="button" value="Read"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| Bench Shirt                   | \$29  | Fashion  | <input type="button" value="Read"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

- Create Login registration with CRUD Application using API (Redux)

# Python Assignment

## **Module – 2 (Fundamentals of python)**

- Write a Python program to check if a number is positive, negative or zero.
- Write a Python program to get the Factorial number of given number.
- Write a Python program to get the Fibonacci series of given range.
- How memory is managed in Python?
- What is the purpose continue statement in python?
- Write python program that swap two number with temp variable and without temp variable.
- Write a Python program to find whether a given number is even or odd, print out an appropriate message to the user.
- Write a Python program to test whether a passed letter is a vowel or not.
- Write a Python program to sum of three given integers. However, if two values are equal sum will be zero.
- Write a Python program that will return true if the two given integer values are equal or their sum or difference is 5.
- Write a python program to sum of the first n positive integers.
- Write a Python program to calculate the length of a string.
- Write a Python program to count the number of characters (character frequency) in a string
- What are negative indexes and why are they used?
- Write a Python program to count occurrences of a substring in a string.
- Write a Python program to count the occurrences of each word in a given sentence

- Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.
- Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead if the string length of the given string is less than 3, leave it unchanged.
- Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'not' follows the 'poor', replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.
- Write a Python function that takes a list of words and returns the length of the longest one.
- Write a Python function to reverse a string if its length is a multiple of 4.
- Write a Python program to get a string made of the first 2 and the last 2 chars from a given string. If the string length is less than 2, return instead of the empty string.
- Write a Python function to insert a string in the middle of a string.

## **Module – 3 (Collections, functions and Modules)**

- What is List? How will you reverse a list?
- How will you remove last object from a list?  
Suppose list1 is [2, 33, 222, 14, and 25], what is list1 [-1]?
- Differentiate between append () and extend () methods?
- Write a Python function to get the largest number, smallest num and sum of all from a list.
- How will you compare two lists?

- Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings.
- Write a Python program to remove duplicates from a list.
- Write a Python program to check a list is empty or not.
- Write a Python function that takes two lists and returns true if they have at least one common member.
- Write a Python program to generate and print a list of first and last 5 elements where the values are square of numbers between 1 and 30.
- Write a Python function that takes a list and returns a new list with unique elements of the first list.
- Write a Python program to convert a list of characters into a string.
- Write a Python program to select an item randomly from a list.
- Write a Python program to find the second smallest number in a list.
- Write a Python program to get unique values from a list
- Write a Python program to check whether a list contains a sub list
- Write a Python program to split a list into different variables.
- What is tuple? Difference between list and tuple.
- Write a Python program to create a tuple with different data types.
- Write a Python program to create a tuple with numbers.
- Write a Python program to convert a tuple to a string.
- Write a Python program to check whether an element exists within a tuple.
- Write a Python program to find the length of a tuple.
- Write a Python program to convert a list to a tuple.
- Write a Python program to reverse a tuple.
- Write a Python program to replace last value of tuples in a list.
- Write a Python program to find the repeated items of a tuple.
- Write a Python program to remove an empty tuple(s) from a list of tuples.
- Write a Python program to unzip a list of tuples into individual lists.
- Write a Python program to convert a list of tuples into a dictionary.
- How will you create a dictionary using tuples in python?



- Write a Python script to sort (ascending and descending) a dictionary by value.
- Write a Python script to concatenate following dictionaries to create a new one.
- Write a Python script to check if a given key already exists in a dictionary.
- How Do You Traverse Through A Dictionary Object In Python?
- How Do You Check The Presence Of A Key In A Dictionary?
- Write a Python script to print a dictionary where the keys are numbers between 1 and 15.
- Write a Python program to check multiple keys exists in a dictionary
- Write a Python script to merge two Python dictionaries
- Write a Python program to map two lists into a dictionary
- Write a Python program to combine two dictionary adding values for common keys.

`d1 = {'a': 100, 'b': 200, 'c': 300} o d2 = {'a': 300, 'b': 200, 'd': 400}`

**Sample output: Counter ({'a': 400, 'b': 400, 'd': 400, 'c': 300}).**

- Write a Python program to print all unique values in a dictionary.
- Why Do You Use the Zip () Method in Python?
- Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

Sample data: `{'1': ['a','b'], '2': ['c','d']}`

**Expected Output:**

**ac ad bc bd**

- Write a Python program to find the highest 3 values in a dictionary
  - Write a Python program to combine values in python list of dictionaries.
- Sample data: `[{'item': 'item1', 'amount': 400}, {'item': 'item2', 'amount': 300}, o {'item': 'item1', 'amount': 750}]`

**Expected Output:**

**Counter ({'item1': 1150, 'item2': 300})**

- Write a Python program to create a dictionary from a string.



Note: Track the count of the letters from the string.

Sample string: 'w3resource'

**Expected output:**

**{'3': 1, 's': 1, 'r': 2, 'u': 1, 'w': 1, 'c': 1, 'e': 2, 'o': 1}**

- Write a Python function to calculate the factorial of a number (a nonnegative integer)
- Write a Python function to check whether a number is in a given range
- Write a Python function to check whether a number is perfect or not.
- Write a Python function that checks whether a passed string is palindrome or not
- How Many Basic Types Of Functions Are Available In Python?
- How can you pick a random item from a list or tuple?
- How can you pick a random item from a range?
- How can you get a random number in python?
- How will you set the starting value in generating random numbers?
- How will you randomizes the items of a list in place?
- Write a Python program to read a random line from a file.
- Write a Python program to convert degree to radian
- Write a Python program to calculate the area of a trapezoid
- Write a Python program to calculate the area of a parallelogram
- Write a Python program to calculate surface volume and area of a cylinder
- Write a Python program to returns sum of all divisors of a number
- Write a Python program to find the maximum and minimum numbers from the specified decimal numbers.

## **Module – 4 (Advance python programming)**

- What is File function in python? What is keywords to create and write file.
- Write a Python program to read an entire text file.
- Write a Python program to append text to a file and display the text.
- Write a Python program to read first n lines of a file.
- Write a Python program to read last n lines of a file.
- Write a Python program to read a file line by line and store it into a list
- Write a Python program to read a file line by line store it into a variable.
- Write a python program to find the longest words.
- Write a Python program to count the number of lines in a text file.
- Write a Python program to count the frequency of words in a file.
- Write a Python program to write a list to a file.
- Write a Python program to copy the contents of a file to another file.
- Explain Exception handling? What is an Error in Python?
- How many except statements can a try-except block have? Name Some built-in exception classes:
- When will the else part of try-except-else be executed?
- Can one block of except statements handle multiple exception?
- When is the finally block executed?
- What happens when „1“== 1 is executed?
- How Do You Handle Exceptions With Try/Except/Finally In Python? Explain with coding snippets.
- Write python program that user to enter only odd numbers, else will raise an exception.
- What are oops concepts? Is multiple inheritance supported in java
- How to Define a Class in Python? What Is Self? Give An Example Of A Python Class

- Write a Python class named Rectangle constructed by a length and width and a method which will compute the area of a rectangle
- Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle
- Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle
- Explain Inheritance in Python with an example? What is init? Or What Is A Constructor In Python?
- What is Instantiation in terms of OOP terminology?
- What is used to check whether an object o is an instance of class A?
- What relationship is appropriate for Course and Faculty?
- What relationship is appropriate for Student and Person?

## **Module – 5 (DB and Python Framework)**

- Why Django should be used for web-development? Explain how you can create a project in Django?
- How to check installed version of django?
- Explain what does django-admin.py make messages command is used for?
- What is Django URLs? make program to create django urls
- What is a QuerySet? Write program to create a new Post object in database:
- Mention what command line can be used to load data into Django?
- Explain what does django-admin.py make messages command is used for?
- Make Django application to demonstrate following things
  - o There will be 2 modules (Admin, Product manager)
  - o Admin can add product name (ex. Product id and product name) ex. (1, Samsung), (2, Apple)...etc.Data should store in

- Product\_mst table with product id as primary key o Admin can add product subcategory details Like (Product price, product image, Product model, product Ram) data should store in Product\_sub\_cat table o Admin can get product name as foreign key from product\_mst table in product\_sub\_category\_details page Admin can view, update and delete all registered details of product manager can search product on search bar and get all details about product.

## **Module - 6 (Rest Framework)**

- Create Django REST API using below instruction.
- Create Book Model
- Title
- Author
- Isbn
- Publisher
- Using Serialize, display all data in REST API
- Also Using REST API, perfume CRUD Operation.