

# Software Engineering Assignment

## MODULE: 1 (SDLC)

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

## MODULE: 2 (HTML)

- Define the terms: Website, Webpage, Web browser, Web server, HTML, CSS
- Create a webpage to show “This is my first HTML page”
- Display top 10 IT companies list in html webpage
- Create a dropdown list
- Create a Table Of college Management system using row span & col span.
- 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						OOD		19to36		

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

**Individual Registration**

**User Particulars**

\* Login ID

\* Password

\* Confirm Password

**Personal Particulars**

* Salutation <input type="text" value="Select"/>	* First Name <input type="text"/>
Middle Name <input type="text"/>	* Last Name <input type="text"/>
* Resident Status <input type="text" value="Select"/>	* Country <input type="text" value="Select"/>
* Email-Id <input type="text"/>	* Mobile Number <input type="text"/>

**Account Particulars**

* 15 Digit Account No <input type="text"/>	* Nick Name <input type="text"/>
* Fund Transfer <input type="text" value="Select"/>	

**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.

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

## MODULE: 3.1 (C Language Fundamental)

- Display This Information using printf
  1. Your Name
  2. Your Birth date
  3. Your Age
  4. Your Address
- Write a program to make Simple calculator (to make addition, subtraction, multiplication, division and modulo)
- WAP to find area of circle, rectangle and triangle
- WAP to find simple interest
- WAP to check if the given year is a leap year or not.
- WAP to convert years into days and days into years

## MODULE: 3.2 (C Language Programing with C)

- WAP to make simple calculator (operation include Addition, Subtraction, Multiplication, Division, modulo)
  - WAP to swap two numbers without using third variable
  - WAP to find number is even or odd using ternary operator
  - WAP to show
    1. Monday to Sunday using switch case
    2. Vowel or Consonant using switch case
  - Looping programs:
    1. WAP to print 972 to 897 using for loop
    2. WAP to take 10 no. Input from user and find out ...
    3. How many Even numbers are there
    4. How many odd numbers are there
    5. Sum of even numbers
    6. Sum of odd numbers
- WAP to print table up to given numbers

- WAP to print factorial of given number
- WAP to print Fibonacci series up to given numbers
- WAP to print number in reverse order e.g.: number = 64728 ---> reverse = 82746
- Write a program to find out the max from given number (E.g., No: -1562 Max number is 6)
- Write a program make a summation of given number (E.g., 1523 Ans: -11)
- Write a program you have to make a summation of first and last Digit. (E.g., 1234 Ans: -5)

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

## MODULE: 3.3 (File Handling and Debugging)

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

- WAP to make addition, Subtraction and multiplication of two matrix using 2-D Array
- WAP Find out length of string without using inbuilt function
- WAP to reverse a string and check that the string is palindrome or not
- Write a program of structure employee that provides the following information -print and display empno, empname, address and age
- Write a program of structure for five employee that provides the following information -print and display empno, empname, address and age
- WAP to show difference between Structure and Union.

## **MODULE: 4.1 (C++ Basic)**

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

## **MODULE: 4.2 (Programing with C++)**

- WAP to create simple calculator using class
- Define a class to represent a bank account. Include the following members:
  1. Data Member:
    - Name of the depositor
    - Account Number
    - Type of Account
    - Balance amount in the account

## 2. Member Functions

- To assign values
  - To deposited an amount
  - To withdraw an amount after checking balance
  - To display name and balance
- Write a program to find the multiplication values and the cubic values using inline function
  - Write a program of Addition, Subtraction, Division, Multiplication using constructor.
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  - 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)
  - 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)
  - 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)
  - Write a program to Mathematic operation like Addition, Subtraction, Multiplication, Division Of two number using different parameters and Function Overloading
  - Write a Program of Two 1D Matrix Addition using Operator Overloading
  - Write a program to concatenate the two strings using Operator Overloading

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

## **MODULE: 4.2 (C, C++ Templates)**

- Write a program of to swap the two values using templates
- Write a program of to sort the array using templates.

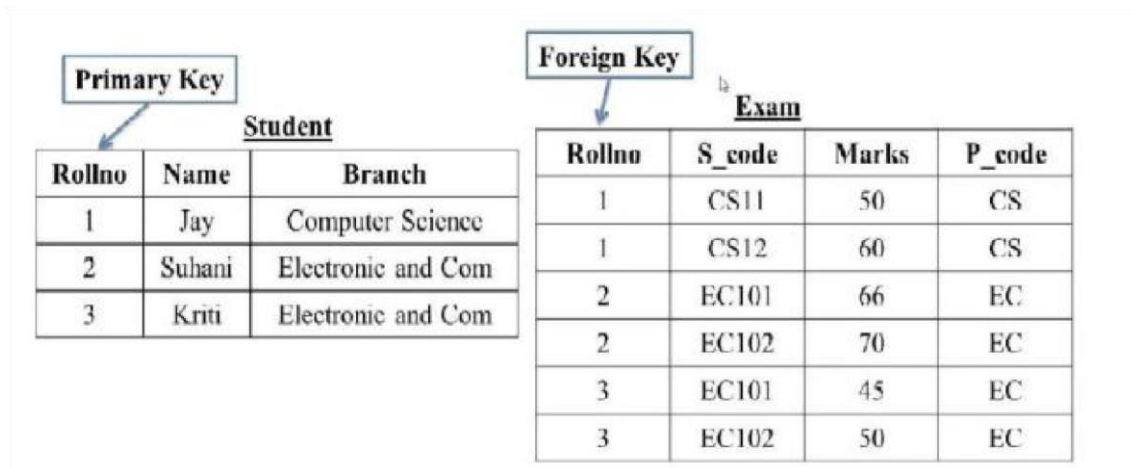
## **MODULE: 5 (Database)**

- What do you understand By Database
- What is Normalization?
- What is Difference between DBMS and RDBMS?
- What is MF Cod Rule of RDBMS Systems?
- What do you understand By Data Redundancy?
- What is DDL Interpreter?
- What is DML Compiler in SQL?
- What is SQL Key Constraints writing an Example of SQL Key Constraints
- What is save Point? How to create a save Point write a Query?
- What is trigger and how to create a Trigger in SQL?



## Task

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



### 2. Create table given below

First Name	Last Name	Address	City	Age
Mickey	Mouse	123 Fantasy Way	Anaheim	73
Bat	Man	321 Cavern Ave	Gotham	54
Wonder	Woman	987 Truth Way	Paradise	39
Donald	Duck	555 Quack Street	Mallard	65
Bugs	Bunny	567 Carrot Street	Rascal	58
Wiley	Coyote	999 Acme Way	Canyon	61
Cat	Woman	234 Purrfect Street	Hairball	32
Tweety	Bird	543	Itotltaw	28



### 3. Create table given below: Employee and Incentive

Table Name: Employee

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

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

- Get First\_Name from employee table using Tom name "Employee Name".
- Get FIRST\_NAME, Joining Date, and Salary from employee table.

- c) Get all employee details from the employee table order by First\_Name Ascending and Salary descending?
- d) Get employee details from employee table whose first name contains 'J'.
- e) Get department wise maximum salary from employee table order by salary ascending?
- f) Select first\_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000
- g) Create After Insert trigger on Employee table which insert records in view table

#### 4. 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

Retrieve the below data from above table

- a) All orders for more than \$1000.
- b) Names and cities of all salespeople in London with commission above 0.12
- c) All salespeople either in Barcelona or in London

- d) All salespeople with commission between 0.10 and 0.12. (Boundary values should be excluded).
- e) All customers excluding those with rating  $\leq 100$  unless they are located in Rome