

Full Stack assignment

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															
	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		
0	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="button" value="Select ▾"/>	* First Name <input type="text"/>
Middle Name <input type="text"/>	* Last Name <input type="text"/>
* Resident Status <input type="button" value="Select ▾"/>	* Country <input type="button" 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="button" 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 Programming 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 (Programming 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.
- Write a program of Addition, Subtraction, Division, Multiplication using constructor.
- 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: $\frac{1}{2} * \text{Area} * \text{breadth}$
 - 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

Primary Key

Student		
Rollno	Name	Branch
1	Jay	Computer Science
2	Suhani	Electronic and Com
3	Kriti	Electronic and Com

Foreign Key

Exam			
Rollno	S_code	Marks	P_code
1	CS11	50	CS
1	CS12	60	CS
2	EC101	66	EC
2	EC102	70	EC
3	EC101	45	EC
3	EC102	50	EC

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	ItotItaw	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

- a) Get First_Name from employee table using Tom name “Employee Name”.
- b) 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 ≤ 100 unless they are located in Rome

Web Designing Assignment

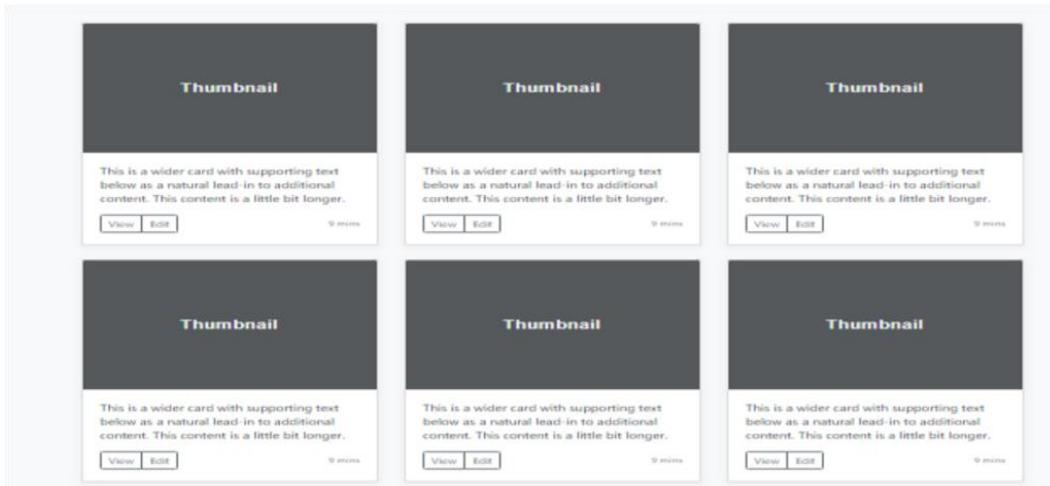
Term-1

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?



Richard Taylor

Software Engineer

See Profile

Laravel Assignment

MODULE – 2 HTML, CSS, SQL

Exercise 1: Try To Create User Details Form.

Step 1: Your details

Name	<i>First and last name</i>
Email	<i>example@domain.com</i>
Phone	<i>Eg. +447500000000</i>

Step 2: Delivery address

Address	
Post code	
Country	

Step 3: Card details

Card type	<input type="radio"/>  VISA <input type="radio"/>  AmEx <input type="radio"/>  Mastercard
Card number	
Security code	
Name on card	<i>Exact name as on the card</i>

BUY IT!

BOOTSRAP

Exercise 1 : Create manage Profile:



Amelly
amelly12@bbb.com

Profile Settings

Name	Surname
<input type="text" value="first name"/>	<input type="text" value="surname"/>
PhoneNumber	
<input type="text" value="enter phone number"/>	
Address	
<input type="text" value="enter address"/>	
Email ID	
<input type="text" value="enter email id"/>	
Education	
<input type="text" value="education"/>	
Country	State/Region
<input type="text" value="country"/>	<input type="text" value="state"/>

Save Profile

Edit Experience

Experience in Designing	Experience
<input type="text" value="experience"/>	
Additional Details	
<input type="text" value="additional details"/>	

~~Exercise 2 - Create Product listing Page~~



HOT
 Product Code/Name here
 Product Category
\$199
 A Short product description here
[Add to cart](#) [More info](#)
 Rating: ★ ★ ★ ★ ★



HOT
 Product Code/Name here
 Product Category
\$50
 A Short product description here
[Add to cart](#) [More info](#)
 Rating: ★ ★ ★ ★ ★



Special
 Product Code/Name here
 Product Category
\$299
 A Short product description here
[Add to cart](#) [More info](#)
 Rating: ★ ★ ★ ★ ★



SALE
 Product Code/Name here
 Product Category
\$1000
 A Short product description here
[Add to cart](#) [More info](#)
 Rating: ★ ★ ★ ★ ★

Topic – SQL Task-1

TABLE: - Employee

EM_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	JOHN	ABRAHAM	1000000	2013-01-01	BANKING
2	MICHAEL	CLERK	800000	2013-01-01	INSURANCE
3	ROY	THOMAS	700000	2013-02-01	BANKING
4	TOM	JOSE	600000	2013-02-01	INSURANCE
5	JERRY	PINTO	650000	2013-01-01	INSURANCE
6	PHILIP	MATHEW	750000	2013-01-01	SERVICES
7	TESTNAME1	123	650000	2013-01-01	SERVICES
8	TESTNAME2	LNAME%	600000	2013-02-01	INSURANCE

TABLE: - Incentives

in센tive_id	EMPLOYEE_REF_ID	INCENTIVE_DATE	INCENTIVE_AMT
1	1	2013-02-01	5000
2	2	2013-02-01	3000
3	3	2013-02-01	4000
4	1	2013-01-01	4500
5	2	2013-01-01	3500

- a) Get First_Name from employee table using alias name “Employee Name”.
- b) Get FIRST_NAME, Joining year, Joining Month and Joining Date 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 „o“.
- e) Get employee details from employee table whose joining month is “January”.
- f) Get department, total salary with respect to a department from employee table
order By total salary descending.
- g) Get department wise maximum salary from employee table order by salary
Ascending.
- h) Select first_name, incentive amount from employee and incentives table for those
employees who have incentives and incentive amount greater than 3000
- i) Select 2nd Highest salary from employee table.
- j) Select first_name, incentive amount from employee and incentives table for all
Employees who got incentives using left join.
- k) Create View OF Employee table in which store first name ,last name and salary
only.
- l) Create Procedure to find out department wise highest salary.
- m) Create After Insert trigger on Employee table which insert records in view table.

Task-2 :

TABLE – SALES PERSON

SNO	SNAME	CITY	COMM
1001	PEEL	LONDON	0.12
1002	SERRES	SAN JOSE	0.13
1003	AXELROD	NEW YORK	0.1
1004	MOTIKA	LONDON	0.11
1007	RAFKIN	BARCELONA	0.15

TABLE – CUSTOMER

CNM	CNAME	CITY	RATING	SNO
201	HOFFMAN	LONDON	100	1001
202	GIOVANNE	ROME	200	1003
203	LIU	SAN JOSE	300	1002
204	GRASS	BARCELONA	100	1002
206	CLEMENS	LONDON	300	1007
207	PEREIRA	ROME	100	1004

TABLE – ORDER

ONM	AMT	ODE	CNM	SNO
3001	18.69	1994-10-03	201	1007
3002	1900.1	1994-10-03	207	1004
3003	767.19	1994-10-03	201	1001
3005	3005	1994-10-03	203	1002
3006	3006	1994-10-04	201	1007
3007	3007	1994-10-05	204	1002
3008	3008	1994-10-05	206	1001
3009	3009	1994-10-04	202	1003
3010	3010	1994-10-06	204	1002
3011	3011	1994-10-06	206	1001

- a) All orders for more than \$1000.
- b) Names and cities of all salespeople in London with commission above 0.10.
- 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 with NULL values in city column.
- f) All orders taken on Oct 3Rd and Oct 4th 1994.
- g) All customers serviced by peel or Motika.
- h) All customers whose names begin with a letter from A to B
- i) All customers excluding those with rating ≤ 100 unless they are located in Rome.
- j) All orders except those with 0 or NULL value in amt field.
- k) Count the number of salespeople currently listing orders in the order table.

MODULE – 3(Core PHP)

- Write a PHP program to enter marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer, calculate percentage and grade by if else write a PHP program for find „Thursday“ in week using switch Function.
- Write a PHP program to check Leap years between 1901 to 2016 Using nested if.
- Write a PHP program to find the largest of three numbers using ternary Operator.

- Write a program in PHP to print Fibonacci series. 0, 1, 1, 2, 3, 5, 8, 13, 21,
 - 34
- Write a program to find whether a number is Armstrong or not
- Write a program to print the below format :

5 9
2610
3711
4812

- Write a program for this Pattern:

*
*
*

- What will be the values of \$a and \$b after the code below is executed? Explain your answer.

```
$a = '1';  
$b = &$a;  
$b = "2$b";
```

- How can you tell if a number is even or odd without using any Condition or loop?

- How can you declare the array (all type) in PHP? Explain with example Convert a JSON string to array.
- Write program to remove duplicate values from array
- Get random values from array
- Write a PHP script which decodes the following JSON string.
- Use a for loop to total the contents of an integer array called numbers which has five elements. Store the result in an integer called total.
- Declare a Multi Dimensioned array of floats called balances having Three rows and five columns.

MODULE – 4(Advance PHP)

OOPS

- What Is Object Oriented Programming?
- What Are Properties Of Object Oriented Systems?
- What Is Difference Between Class And Interface?
- What Is Overloading?
- What Is T_PAAMAYIM_NEKUDOTAYIM (Scope Resolution Operator (::) with Example
- What are the differences between abstract classes and interfaces?
- Define Constructor and Destructor?
- How to Load Classes in PHP?

- How to Call Parent Constructor?
- Are Parent Constructor Called Implicitly When Create An ObjectOf Class?
- What Happen, If Constructor Is Defined As Private Or Protected?
- What are PHP Magic Methods/Functions? List them
- Write program for Static Keyword in PHP?
- Create multiple Traits and use it in to a single class?
- Write PHP Script of Object Iteration?
- Use of The \$this keyword
- Consider the exercise11and add a edit link near delete link e.g. Clicking up on edit button a particular row should be open in
 - editing mode
 - e.g. on the Particular row there should be filled text box with data and on the option column there should be a confirm button clicking upon it arrow should be updated.
- Create Hotel Room Booking System User can book room by 3 ways
 - Full day
 - Half day
 - Custom
 - If user select for the full day than user only have selection for thechecking checkout date
 - If user select Half day than user have option of date and slot option(like user want to book room for first half – Morning (8AM to 6PM) if user select for second halfit's for evening (7PM to Morning 7AM)). Do proper validation like if user can book only available slot. (have touse jQuery -> Ajax, validation, Json passing).

Jquery

- a) What is jQuery?

- b) How are JavaScript and jQuery different?
- c) Which is the starting point of code execution in jQuery?
- d) Document Load Vs Window. Load() jQuery
- e) What is the difference between prop and attr?
- f) Explain Difference Between JQuery And JavaScript?
- g) How We Can Select The Specified Element From The ListOf Elements In ?
- h) In <table> Design Change The Color Of Even <tr> Elements To “green” And Change The Color Of Odd <tr> Elements To “blue” Color? Give An Example Code?
- i) How We Can Implement Animation Effects In Jquery?
- j) Apply jQuery validation using library.
- k) Create custom dynamic function for require field validator.
- l) Get state data by country selection (Ajax).
- m) Image uploading with preview.

MODULE – 5(Web Services)

- Create API for Registration & Login Page.
- Create Web Service for your MVC Project.
- Create API for Image Uploading.

MODULE – 7(Laravel)

- Create Following Routes.(for frontend side application)

- a) Home page
- b) About us
- c) Contact us
- d) Gallery
- e) Registration
- f) Login
- How to pass Multiple Variable in route?
- How to pass variable which can be null in Route?
- Create custom auto using middleware.
- Generate Resource Controller For employee.
- In Employee Controller's action Call Middleware
- How to remove route caching?
- Create Custom Macro For search User

Practical

1. Create Photo Gallery for above route.

Note: upload files from admin side. Show all the images in user side

2. Download admin panel for employee management and convert it in Laravel blades.

MODULE – 8(Migration)

- How to do config database in laravel
- Call MySQLi Store Procedure from Laravel.
- Apply Curd Operation through Query Builder for Employee Management
- Create All Migration for Employee management

MODULE – 9,10(Forms,Controlls)

- Explain ORM
- Do Curd using Eloquent Query
- Explain - Eloquent Relationships
- What is Eager Loading and lazy loading?
- Do Session for Employee Management System.

Practical

- a) Do pagination for Employee Management System
- b) If New User Registered Put Notification on admin side in Employee Management
- c) Write code for sending email
- d) Create application for blog.

Create a new Post

title...

content...

Java Assignments

Module – 1

- Write a Java program to Take three numbers from the user and print the greatest number.
- Write a Java program that takes the user to provide a single character from the alphabet. Print Vowel or Consonant, depending on the user input. If the user input is not a letter (between a and z or A and Z), or is a string of length > 1, print an error message.
- Write a Java program that takes a year from user and print whether that year is a leap year or not. B19. Write a program in Java to display the first 10 natural numbers using while loop.
- Write a program in Java to input 5 numbers from keyboard and find their sum and average using for loop.
- Write a program in Java to display the pattern like right angle triangle with a number.

1

12

123

1234

12345

- Write a program in Java to make such a pattern like right angle triangle with number increased by 1 The pattern like:

1

2 3

4 5 6

7 8 9 10

- Write a Java program that reads a positive integer and count the number of digits the number.



Input an integer number less than ten billion: 125463 Number of digits in the number: 6

- Write a Java program to count the letters, spaces, numbers and other characters of an input string.
- Write a Java program to print the ASCII value of a given character.
- Write a Java program that accepts an integer (n) and computes the value of $n+nn+nnn$.

Input number: 5

$5 + 55 + 555$

- Write a Java program to display the system time.
- Write a Java program to print numbers between 1 to 100 which are divisible by 3, 5 and by both.

Module – 2

- W.A.J.P to get the character at the given index within the String. Original String = Tops Technologies! The character at position 0 is T, The character at position 10 is o
- W.A.J.P to concatenate a given string to the end of another string.
- W.A.J.P to compare a given string to the specified character sequence. Comparing topsint.com and topsint.com: true Comparing Topsint.com and topsint.com: false
- W.A.J.P to check whether a given string ends with the contents of another string. "Java Exercises" ends with "se"? False "Java Exercise" ends with "se"? True
- W.A.J.P to check whether a given string starts with the contents of another string. Red is favourite color. Starts with Red? True Orange is also my favorite color. Starts with Red? False I3.
- W.A.J.P to find all interleaving of given strings.
The given strings are: WX YZ
The interleaving strings are: YWZX WYZX YWXZ WXYZ YZWX WYXZ
- W.A.J.P to find the second most frequent character in a given string. The given string is: successes The second most frequent char in the string is: c
- Create a class named 'PrintNumber' to print various numbers of different data types by creating different methods with the same name 'printn' having a parameter for each data type.
- Create a class to print an integer and a character with two methods having the same name but different sequence of the integer and the character parameters. For example, if the parameters of the first method are of the form (int n, char c), then that of the second method will be of the form (char c, int n).
- Create a class to print the area of a square and a rectangle. The class has two methods with the same name but different number of parameters. The method for printing area of a rectangle has two parameters which are length and breadth respectively while the other method for printing area of square has one parameter which is side of square.
- Create a class with a method that prints "This is a parent class" and its subclass with another method that prints "This is child class". Now, create an object for each of the class and call 1 - method of parent class by object of parent class 2 - method of child class by object of child class 3 - method of parent class by object of child class

- Create a class named 'Member' having the following members:
 Data members
 Name
 Age
 Phone number
 Address 5 - Salary
 It also has a method named 'printSalary' which prints the salary of the members.
 Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.
- Create a class named 'Rectangle' with two data members 'length' and 'breadth' and two methods to print the area and perimeter of the rectangle respectively. Its constructor having parameters for length and breadth is used to initialize the length and breadth of the rectangle. Let class 'Square' inherit the 'Rectangle' class with its constructor having a parameter for its side (suppose s) calling the constructor of its parent class as 'super (s, s)'. Print the area and perimeter of a rectangle and a square.
- B41. Write a program to print the area and perimeter of a triangle having sides of 3, 4 and 5 units by creating a class named 'Triangle' without any parameter in its constructor.
- Print the sum, difference and product of two complex numbers by creating a class named 'Complex' with separate methods for each operation whose real and imaginary parts are entered by user.
- Create an abstract class 'Parent' with a method 'message'. It has two subclasses each having a method with the same name 'message' that prints "This is first subclass" and "This is second subclass" respectively. Call the methods 'message' by creating an object for each subclass.
- Create an abstract class 'Bank' with an abstract method 'getBalance'. \$100, \$150 and \$200 are deposited in banks A, B and C respectively. 'BankA', 'BankB' and 'BankC' are subclasses of class 'Bank', each having a method named 'getBalance'. Call this method by creating an object of each of the three classes.
- We have to calculate the percentage of marks obtained in three subjects (each out of 100) by student A and in four subjects (each out of 100) by student B. Create an abstract class 'Marks' with an abstract method

'getPercentage'. It is inherited by two other classes 'A' and 'B' each having a method with the same name which returns the percentage of the students. The constructor of student A takes the marks in three subjects as its parameters and the marks in four subjects as its parameters for student B. Create an object for each of the two classes and print the percentage of marks for both the students.

- Write a program to print the factorial of a number by defining a method named 'Factorial'. Factorial of any number n is represented by $n!$ and is equal to $1*2*3* \dots * (n-1) * n$. E.g.-

$$4! = 1*2*3*4 = 24$$

$$3! = 3*2*1 = 6$$

$$2! = 2*1 = 2$$

$$\text{Also, } 1! = 1$$

$$0! = 0$$

- We have to calculate the area of a rectangle, a square and a circle. Create an abstract class 'Shape' with three abstract methods namely 'RectangleArea' taking two parameters, 'SquareArea' and 'CircleArea' taking one parameter each. The parameters of 'RectangleArea' are its length and breadth, that of 'SquareArea' is its side and that of 'CircleArea' is its radius. Now create another class 'Area' containing all the three methods 'RectangleArea', 'SquareArea' and 'CircleArea' for printing the area of rectangle, square and circle respectively. Create an object of class 'Area' and call all the three methods. I3. Write a program which will ask the user to enter his/her marks (out of 100). Define a method that will display grades according to the marks entered as below:

MarksGrade

91-100	AA
81-90	AB
71-80	BB
61-70	BC
51-60	CD
41-50	DD
<=40	Fail

- Create a class named 'Shape' with a method to print "This is this is shape". Then create two other classes named 'Rectangle', 'Circle' inheriting the Shape class, both having a method to print "This is rectangular shape" and "This is circular shape" respectively. Create a subclass 'Square' of

'Rectangle' having a method to print "Square is a rectangle". Now call the method of 'Shape' and 'Rectangle' class by the object of 'Square' class.

- W.A.J. P to demonstrate try catch block,
- Take two numbers from the user and perform the division operation and handle Arithmetic Exception. O/P-

Enter two numbers: 10 0

Exception in thread main java.lang.ArithmaticException:/ by zero

- W.A.J. P to demonstrate multiple catch blocks, (one is to handle divide by zero exception and another one is to handle ArrayIndexOutOfBoundsException) int a [] =new int [5]; a [5]=30/0;
- W.A.J. P to implement the above program (pro.no-B27) using nesting of try-catch block. try {

try

{//code}

catch (Exception e)

{//code}

catch (Exception e)

{//code}

- W.A.J. P to demonstrate try catch block, take two numbers from the user by Command line argument and perform the division operation and handle Arithmetic

O/P-

Exception in thread main java. Lang. ArithmaticException:/ by zero

- W.A.J.P to read 10 integer values using Scanner class from keyboard. Generate the exception if the entered value is less than 10 and or greater than 40. Program should display appropriate message as and when this exception occurs otherwise it will display all the entered values.
- W.A.J.P to create the validate method that takes integer value as a parameter. If the age is less than 18, then throw an ArithmaticException otherwise print a message welcome to vote.

O/P- Enter your age: 16

Exception in thread main java. lang. ArithmaticException: not valid

- W.A.J.P to create a custom exception if Customer withdraw amount which is greater than account balance then program will show custom exception otherwise amount will deduct from account balance.

Account balance is: 2000 Enter withdraw amount: 2500

Sorry, insufficient balance, you need more 500 Rs. To perform this transaction.

- W.A.J.P to create a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If age of student is not in between 15 and 21 then generate user defined exception "AgeNotWithinRangeException". If name contains numbers or special symbols raise exception "NameNotValidException". Define the two exception classes.
- W.A.J. P to create one thread by implementing Runnable interface in Class.
- W.A.J. P to create one thread by extending Thread class in another Class.
- W.A.J.P to create 2 threads and execute that threads by providing sleep time as 2000ms and check the execution.
- W.A.J.P to start the same Thread twice by calling start () method twice.

```
Test ThreadTwice1 t1=new TestThreadTwice1();
t1.start ();
t1.start ();
```
- W.A.J.P to set the user defined name, priority and get that name and priority for 2 threads using setName (), setPriority (), getName (), getPriority () methods of Thread class.

```
TestMultiPriority1 m1=new TestMultiPriority1 (); TestMultiPriority1
m2=new TestMultiPriority1 ();
m1.setName ("mythread-1");
m2.setName ("mythread- 2");
m1.setPriority (Thread.MIN_PRIORITY);
m2.setPriority (Thread.MAX_PRIORITY);
m1.start ();
m2.start ();
```
- W.A.J.P to create 2 threads and make one thread as Daemon Thread by using set Daemon () method of Thread class and check whether the thread is set daemon or not by using is Daemon () method.
- TestDaemonThread2 t1=new TestDaemonThread2();


```
TestDaemonThread2 t2=new TestDaemonThread2(); t1.start();
```
- t1.setDaemon(true); //will throw exception here t2.start();
- Write a Java program to create a new array list, add some colours (string) and print out the collection.
- Write a Java program to iterate through all elements in an array list.
- Write a Java program to insert an element into the array list at the first position.

- Write a Java program to retrieve an element (at a specified index) from a given array list.
- Write a Java program to update specific array element by given element.
- Write a Java program to remove the third element from an array list.
- Write a Java program to search an element in an array list.
- Write a Java program to sort a given array list.
- Write a Java program to copy one array list into another.
- Write a Java program to shuffle elements in an array list.
- Write a Java program to append the specified element to the end of a hash set.
- Write a Java program to iterate through all elements in a hash list.
- Write a Java program to get the number of elements in a hash set.
- Write a Java program to associate the specified value with the specified key in a HashMap.
- Write a Java program to count the number of key-value (size) mappings in a map.
- Write a Java program to reverse elements in an array list.
- Write a Java program to extract a portion of an array list.
- Write a Java program to compare two array lists.
- Write a Java program of swap two elements in an array list.
- Write a Java program to join two array lists.
- Write a Java program to convert a hash set to an array.
- Write a Java program to convert a hash set to a List/ArrayList.
- Write a Java program to check whether a map contains key-value mappings (empty) or not.
- Write a Java program to increase the size of an array list.
- Write a Java program to replace the second element of an ArrayList with the specified element.
- Write a Java program to print all the elements of an ArrayList using the position of the elements.
- Write a Java program to compare two sets and retain elements which are same on both sets.
- Write a Java program to get a collection view of the values contained in this map.

Module – 3

Field	Type	Null	Key	Default
Empno	int(4)	NO	PRI	0
Ename	varchar(10)	YES		(NULL)
Job	varchar(9)	YES		(NULL)
Mgr	int(4)	YES		(NULL)
Hiredate	date	YES		(NULL)
Sal	decimal(7,2)	YES		(NULL)
Comm	decimal(7,2)	YES		(NULL)
Deptno	int(2)	YES	MUL	(NULL)

DEPT TABLE:

Field	Type	Null	Key	Default
Deptno	int(2)	NO	PRI	0
Dname	varchar(14)	YES		(NULL)
Loc	varchar(13)	YES		(NULL)

STUDENT TABLE:

Field	Type	Null	Key	Default
Rno	int(2)	NO	PRI	0
Sname	varchar(14)	YES		(NULL)
City	varchar(20)	YES		(NULL)
State	Varchar(20)	YES		(NULL)

EMP LOG TABLE:

Field	Type	Null	Key	Default
Emp_id	int(5)	NO		(NULL)
Log_date	Date	YES		(NULL)
New_salary	Int(10)	YES		(NULL)
Action	Varchar(20)	YES		(NULL)



DEPT TABLE DATA:

Deptno	dname	loc
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

EMP TABLE DATA:

Empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	(NULL)	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	(NULL)	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	(NULL)	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	(NULL)	10
7788	SCOTT	ANALYST	7566	1987-06-11	3000.00	(NULL)	20
7839	KING	PRESIDENT	(NULL)	1981-11-17	5000.00	(NULL)	10
7844	TURNER	SALESMAN	7698	1981-08-09	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1987-07-13	1100.00	(NULL)	20
7900	JAMES	CLERK	7698	1981-03-12	950.00	(NULL)	30
7902	FORD	ANALYST	7566	1981-03-12	3000.00	(NULL)	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	(NULL)	10

1. Select unique job from EMP table.
2. List the details of the emps in asc order of the Dptnos and desc of Jobs?
3. Display all the unique job groups in the descending order?
4. List the emps who joined before 1981.
5. List the Empno, Ename, Sal, Daily sal of all emps in the asc order of Annsal.

6. List the Empno, Ename, Sal, Exp of all emps working for Mgr 7369.
7. Display all the details of the emps who's Comm. Is more than their Sal?
8. List the emps who are either 'CLERK' or 'ANALYST' in the Desc order.
9. List the emps Who Annual sal ranging from 22000 and 45000.
10. List the Enames those are starting with 'S' and with five characters.
11. List the emps whose Empno not starting with digit78.
12. List all the Clerks of Deptno 20.
13. List the Emps who are senior to their own MGRS.
14. List the Emps of Deptno 20 who's Jobs are same as Deptno10.
15. List the Emps who's Sal is same as FORD or SMITH in desc order of Sal.
16. List the emps whose jobs same as SMITH or ALLEN.
17. Any jobs of deptno 10 those that are not found in deptno 20.
18. Find the highest sal of EMP table.
19. Find details of highest paid employee.
20. Find the total sal given to the MGR.
21. List the emps whose names contains 'A'.
22. Find all the emps who earn the minimum Salary for each job wise in ascending order.
23. List the emps whose sal greater than Blake's sal.
24. Create view v1 to select ename, job, dname, loc whose deptno are same.
25. Create a procedure with dno as input parameter to fetch ename and dname.
26. Add column Pin with bigint data type in table student.
27. Modify the student table to change the sname length from 14 to 40.
Create trigger to insert data in emp_log table whenever any update of sal in EMP table. You can set action as 'New Salary'.

• Write swing example with database connectivity to achieve the following.



REGISTRATION FORM

S.No	ID	Name	Gender	Address	Contact

Registration Form

ID: [Text Box]

Name: [Text Box]

Gender: Male Female

Address: [Text Box]

Contact: [Text Box]

Buttons: Exit, Register, Delete, Update, Reset, Refresh Table

Module – 4

- Write a Java program to fetch data from web.xml to Servlet using ServletConfig.
- Write a Java program to fetch data from web.xml to Servlet using ServletContext.
- Write a Java program to submit student information (fname, lname, email, mobile, gender, password) using jsp form to servlet. Fetch data at servlet and print all the data in console.
- Write above Java program and print fetched data on another jsp using expression language.
- Write a Java program to fetch all the data from database table and print on jsp page using JSTL SQL tag library.
- Write a Java program to validate jsp form server side.
First Name: Only Alphabets Last Name: Only Alphabets Mobile: Only 10 Numbers Email: Standard Email Id
Password: Minimum One 1 Upper, Minimum 1 Lower, Minimum 1 Digit, Minimum 1 Special Character from @, #, \$, %, _, & !. Write CRUD operation using jsp only.
- Write a jsp/servlet CRUD operation for following.
Student:
 - a. Int id;(primary key, Auto Increment)
 - b. String fname, lname, email, mobile, gender, password;
 - c. Need to use bootstrap responsive template for the same.
 - d. Use client side validation to for all data input.
 - e. Use regular expression for email for standard email input.
 - f. Use regular expression for password like(Test@123)
 - g. Use server side validation (Filter) same as client side validation.
 - h. All the inserted data should be show in show.jsp with edit and delete functionality.
 - i. Store all the deleted record in table named deleted data.

Module – 5

- Write a Java dynamic application “Message Passing System “using MVC and JDBC.

User:

Int uid ;(primary key, auto increment)

String fname, lname, email, mobile; Message:

Int uid;

String from, to, msg;

- Create one registration form to register user.
- Do client and server side validation.
- Use AJAX to register with unique email id.
- After successful registration confirmation email should be sent to user's email id with one OTP.
- Verify OTP and then and then allowed to login to the user.
- After successful login user can edit their profile.
- Also one user can send some msg to another user using their email id.
- When another user logged in they are able to see msg sent by a particular user and also can reply.
- Logout button is there to invalidate session.
- Also take care when user logged out and press back button on browser then it should be in logged out mode.

Module – 6

- W.A.J.P to insert below data from jsp to MySQL database using “.cfg.xml” and “. hbm.xml” file. Variable id must be primary key and auto increment
Int id
String first name, last name, email, mobile, password, gender
- W.A.J.P using above configuration with annotation and also show login jsp after data insert or registration.
- Write above Java program for after successful registration student can login and if login credentials are correct then show student's home page with his/her detail.
- Write above Java program for after successful login student can able to view and edit his/her profile with logout option. Also need to upload and show student's picture on his/her profile's home page.

All the Questions Below Need to Perform Using Some Bootstrap Design Templates “

- Write a program to establish One to One Relationship between given 2 classes and perform a CRUD operation.

Student:

```
Int studentId;  
String studentName;  
Address; Address:  
Int addressId;  
String street, city, state, zip code;
```

- Write a program to establish one to many and Many to One relationship between given 2 classes and perform a CRUD operation.

Cart:

```
int cartId;  
double total;  
String name; Set<Item> items;
```

Items:

```
Int id;  
String itemId;
```



- ```
Double itemTotal;
Int quantity;
Cart cart;
```
- Write a program to establish many to many relationships between given 2 classes and perform a CRUD operation.

Reader:

```
Int readerId;
String email, firstName, lastName;
Set<Subscription> subscriptions;
```

Subscription:

```
Int subscriptionId;
String subscriptionName; Set<Reader> readers;
```

## Module – 7

- Write a program to demonstrate the setter based dependency injection.
- Write a program to demonstrate the constructor based dependency injection.
- Write a program to demonstrate the object based dependency injection and also implement inner bean concept in your spring beans configuration file.
- Write a program to collect 5 student information using spring collection(List) in spring bean configuration file.

Student:

```
Int id;
String fname, lname, email, mobile.
```

- Write a Spring ORM application to demonstrate following things.
  1. Need to use bootstrap template.
  2. There will be 2 modules. User and Admin.
  3. User (id, firstname, lastname, email, mobile, password, gender, profile\_pic) have to register to the site. (registration.jsp)
  4. Then user have to login(login.jsp) and can able to edit profile like email, mobile or profile\_pic.
  5. Admin can login to the site and able see all the user registered with system and also able to delete profile of a user.
- Write a Spring MVC+ORM application to demonstrate the following

Spring MVC Form
Add User

### All Users

| #ID | Name   | Email            | framework          | Action                                                              |
|-----|--------|------------------|--------------------|---------------------------------------------------------------------|
| 100 | mkyong | mkyong@gmail.com | Spring MVC , GWT   | <a href="#">Query</a> <a href="#">Update</a> <a href="#">Delete</a> |
| 101 | alex   | alex@yahoo.com   | Spring MVC , PLAY  | <a href="#">Query</a> <a href="#">Update</a> <a href="#">Delete</a> |
| 102 | joel   | joel@gmail.com   | Spring MVC , JSF 2 | <a href="#">Query</a> <a href="#">Update</a> <a href="#">Delete</a> |

things.

1. Add user with validation.



2. On clicking Query display single user data.
3. Update is for changes in user data.
4. Delete data.
5. Use bootstrap for UI part.



## MVC.Net Assignments

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### MODULE 2

1. What is role of client?
2. What is role of server?
3. What is client server architecture?
4. What is role of compiler?
5. What is difference between Compiler and Interpreter?
6. What is MVC?
7. What is communication protocol and what is difference between HTTP and HTTPS?
8. What is .net?
9. What is CLR?
10. What is difference between CLS and CTS?
11. What is difference between Compiler and Interpreter?
12. What is communication protocol and what is difference between HTTP and HTTPS?
13. What do you mean by design pattern?
14. What is client server architecture?
15. What is difference between Asp.Net and MVC.Net?

### MODULE 3

1. What is C#?
2. Can we use keywords as an identifier? Why?
3. Create program to take 5 students details using structure
4. Create a program to differentiate explicit and implicit conversation.
5. Create program to sort string in descending order
6. Explain any 5 string operation methods
7. Create program to take 2 numbers from user and show maximum number
8. Write a program to perform below series and patterns
  - a.  $1+4+9+16+25+\dots$
  - b.  $1+1+2+3+5+8+\dots$
  - c.  $1+5+14+30+55+\dots$
9. Solve the following patterns-
  - a. 1
  - 2 3
  - 4 5 6
  - 7 8 9 10

## MVC.Net Assignments

---

b. \*

```
#
* * *
#
* * * * *
```

c. \*

```
* #
* # *
* # *
* # * #
* # * # * #
```

d. \*

```
* *
* *
* *
* *
* * * *
```

e. 1  
2 2  
3 3 3  
4 4 4 4  
5 5 5 5 5

f. 1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5

10. What do you mean by loop variable?
  11. What do you mean by iteration?
  12. What is Array?
  13. Show ASCII value of entered number
  14. What is jagged array? Explain with example
  15. Create program to iterate string variable using foreach loop
  16. Write a program to call class method.
  17. Write a program to calculate arithmetic operations using class and object.
-

## MVC.Net Assignments

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18. Write a program to call method of parent class.
19. Write a program to get three subject marks details and then show average and sum.
20. Write a program to calculate factorial number of user defined value using class.
21. Write a program to perform an example of data hiding.
22. How can we manage runtime errors?
23. What is abstract class?
24. What is thread?
25. What is dll?
26. What is namespace?
27. Create program to replace specific word from string
28. Create program to take 3 numbers from user and show maximum and minimum number
29. What is difference between else if ladder and switch case
30. What will occur if we not write break statement in switch case?
31. What is difference between entry loop and exit loop? Explain with example
32. What do you mean by multi-dimension array?
33. Explain 5 method of array class with example
34. Get 5 values from user and store in array and show all elements and sum of elements
35. Create program to make transform of two matrices
36. What is difference between for loop and foreach loop?
37. Write a program to call static method using class.
38. Write a program to implement multilevel inheritance.
39. Write a program to get 10 Employee details including name, salary, department and show name and designation whose salary is highest.
40. Write a program to implement multiple inheritance.
41. Write a program to redefine method logic in child class. (Overloading)
42. Write a program to access private variables outside of class.
43. Write a program to divide class definition into multiple parts. (Partial Class)
44. What is dictionary? Advantages of Dictionary?
45. What is multithread?
46. How to prevent class to be instantiate?
47. Create program to replace specific character from string
48. What is mutable and immutable string?
49. Write a program to find factorial of user defined number
50. Write a program to sort a numeric array without using array methods.
51. What is difference between array and list?
52. Create one collection where can be store all data types by indexing
53. Get 5 values from user and show maximum value from array

## MVC.Net Assignments

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54. Write a program to define base class with fixed method signature and implement them into derived class. (Abstract Class)
55. Write a program of abstract class with implemented methods and declared methods.
56. Write a program of abstract class with implemented methods and declared methods.
57. Write a program to Get 10 random numbers using parent class's constructor and implement one method in derived class to show them in ascending manner.
58. Write a program to prevent class from being instantiated.
59. Write a program to implement virtual method in derived class.
60. Write a program to show details of 10 products including Product Name, Product Price, Qty to user and provide them ability to make order with qty and show final amount of bill.
61. Create a program to store student's details using Dictionary
62. What is generics? Explain with example
63. What is use of method overriding?

## MODULE 4

1. What is model?
2. What is routing in MVC?
3. What is the difference between Temp data, View, and View Bag?
4. What is difference between MVC and Web Forms?
5. What is session? What is the default time for session?
6. What is Partial View in MVC? With example
7. What is the difference between View and Partial View?
8. Explain the concept of MVC Scaffolding?
9. How to change time of session?
10. What is query string? What are disadvantages of query string?
11. What is cookie? What are limitations for cookie?
12. Create one example to store data in session and show on other view.
13. Explain MVC application life cycle.
14. List out different return types of a controller action method
15. What are filters in MVC?
16. What are HTML helpers in MVC?
17. Differences between Razor and ASPX View Engine in MVC?
18. Pass one values from one view to another view using query string.

## MVC.Net Assignments

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### MODULE 5

1. Explain Areas in MVC?
2. Explain RenderSection in MVC?
3. Which assembly is the MVC framework is defined?
4. Apply validations using data annotation attributes.
5. What is difference between javascript and jquery?
6. What is Linq?
7. What is difference between Linq and Entity Framework.?
8. Create One Registration Page for Student Registration Model Class and When Student Click on Submit Button, Details of student must be display on same page.  
Fields : First Name, Last Name, Email id, Mobile, Gender, City, Address, Course (Dropdown list), Fees, Tax (Label with Text 12.50%), Total Fees.
9. Create View Model for CRUD Operation in Country, State and City Table with validation using EF.
10. What is Data Annotation Validator Attributes in MVC?
11. What are AJAX Helpers in MVC?
12. Write a program to perform join on two lists.
13. Perform CRUD operation using LINQ
14. What are required attributes for Ajax call?
15. Create insert/update/delete/view on same view using AJAX
16. What is JsonResultType in MVC?
17. What is the meaning of Unobtrusive JavaScript?
18. What are the sub types of ActionResult?
19. Get Data using FormCollection and store data into session and show on another view.
20. Bind Following Controls using Model Class Dynamically DropDownList, ListBox, CheckBoxList
21. Different way to return view in MVC?
22. Create Multiple Image Upload Example, Image Display after Upload. (Use Database table for save data like image name, size, type, URL)

### MODULE 6

1. What is Nuget & package?
2. What is WebService?
3. What is request and response?

## MVC.Net Assignments

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4. What is postback?
5. What is IIS?
6. What is web.config?
7. Which are the type of WebService?
8. What is XML and Json?
9. Create application to perform crud operation using WebApis.
10. Create Web Grid Example using Nuget Package for City table data Display with country name and state name using WebApi.

## Node JS Assignments

### Module – 1: Node - JavaScript Fundamental

- Q1 :\_What is the difference between Java & JavaScript?
- Q2. What is JavaScript?
- Q3. What are the data types supported by JavaScript?
- Q4. What are the scopes of a variable in JavaScript?
- Q5. What is Callback?
- Q6. What is Closure? Give an example.
- Q7. What is the difference between the operators ‘==’ & ‘====’?
- Q8. What is the difference between null & undefined?
- Q9. What would be the result of 2+5+”3”?
- Q10. What is the difference between Call & Apply?

### Module - 2: Node - NodeJS – Introduction

- Q1. What is Node.js? Where can you use it?
- Q2. Explain callback in Node.js.
- Q3. What are the advantages of using promises instead of callbacks?
- Q4. What is NPM?
- Q5. What are the modules in Node.js? Explain
- Q6. Create TODO app using FS module with yargs (command line arguments).

### Module – 3: Node - Web Development with Node

- Q1. What is Express.js?**
- Q2 .Create localhost server using express.
- Q3 . Create basic “Hello world” app using node and express.
- Q4. Create weather app.
  - i. Use Hbs.
  - ii. Get country, state, city using api
  - iii. Get weather data by city
- Q5. Create world clock app.

## **Module – 4 : Node - Node with Mongodb**

- Q1. What is MongoDB.
- Q2. What is difference between mongo DB and SQL
- Q3. Create database for online shopping app.
- Q4. Create Require collections for online shopping app and documents.
  - i. User
  - ii. Product category
  - iii. Product
  - iv. Order
  - v. Review

- Q5. Write command to show all data from product collections and sort in ascending order.
- Q6. Update product price for particular product.
- Q7. Write command to delete particular document and collection.

## **Module – 5: Structuring REST API**

- Q1. Create Rest API (get, post, delete, put, patch) for Task management.
- Q2. Create Rest API (get, post, delete, put, patch) for online shopping application.

## **Module – 6: Node - [API Authentication & Security]**

- Q1. What is Middleware in Express.js?
- Q2. What is json web tokens?
- Q3. What is different between encryption and hashing.
- Q4. Create CRUD Application.
  - i. Create session management (login & logout)
  - ii. Generate token while registration and login
  - iii. Create logout from one device.
  - iv. Create logout from all device.



## Python Assignments

### Module – 2

- 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 reverses 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 a string. If the string length is less than 2, return instead of the empty string.
  - Sample String: w3resource'
  - Expected Result: 'w3ce'
  - Sample String: 'w3'
  - Expected Result: 'w3w3'
  - Sample String: ' w'
  - Expected Result: Empty String
- Write a Python function to insert a string in the middle of a string.

## Module – 3

- 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}
  - 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},
  - {'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 non-negative 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 do you perform pattern matching in Python? Explain
- What is lambda function in python? What we call a function which is incomplete version of a function?
- 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

- 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

- Why Django should be used for web-development? Explain how you can create a project in Django?
- How to check installed version of django?
- Mention what command line can be used to load data into 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
  - There will be 2 modules(Admin,Product manager)
  - 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
  - Admin can add product subcategory details Like (Product price, product image,
  - Product model, product Ram) data should store in Product\_sub\_cat table
  - 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
  - product manager can search product on search bar and get all details about product

## Module – 6

- 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, perform CRUD Operation

# 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 | 2        | \$29.99          | \$59.98          | <b>Remove</b> |
| <br>Woven Trellis Window Hardware - Clip Rings - Bronze    | 1        | \$12.99          | \$12.99          | <b>Remove</b> |
|                                                                                                                                               |          |                  | \$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?

### The "React Way" to Render a List

-  Use Array .map
-  Not a for loop
-  Give each item a unique key
-  Avoid using array index as the key

- Create Increment decrement state change by button click?

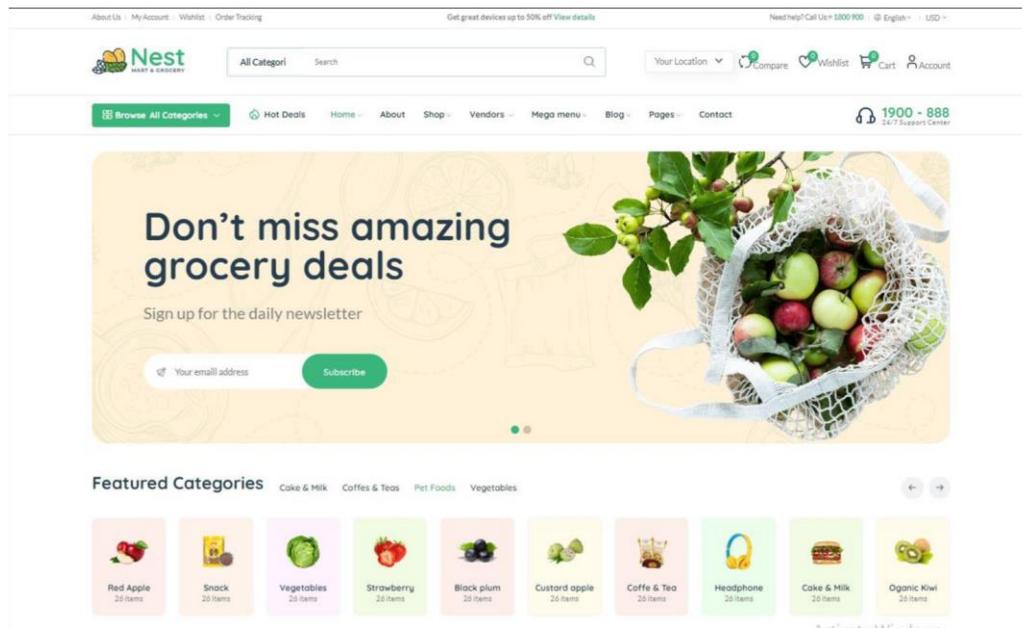


## Module – 4 Lists and Hooks

- 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

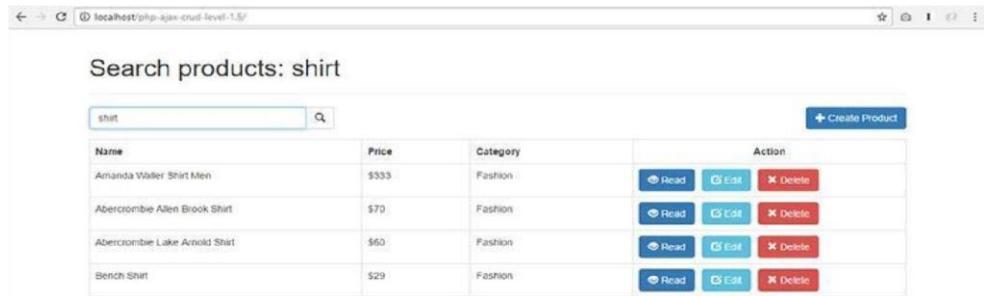


## Module 6) React Router

- 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 ?



Search products: shirt

| Name                          | Price | Category | Action             |
|-------------------------------|-------|----------|--------------------|
| Amanda Waller Shirt Men       | \$333 | Fashion  | Read  Edit  Delete |
| Abercrombie Allen Brook Shirt | \$70  | Fashion  | Read  Edit  Delete |
| Abercrombie Lake Arnold Shirt | \$60  | Fashion  | Read  Edit  Delete |
| Bench Shirt                   | \$29  | Fashion  | Read  Edit  Delete |

+ Create Product

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