

Mernstack 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 3rd variable and without using 3rd variable
22. Calculate compound interest (Compound Interest formula:
 - a. Formula to calculate compound interest annually is given by:
$$\text{Amount} = P(1 + R/100)^t$$
 - 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 ≥ 65 and Marks in Phy ≥ 55 and Marks in Chem ≥ 50 and Total in all three subject ≥ 190 or Total in Maths and Physics ≥ 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 ≥ 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**

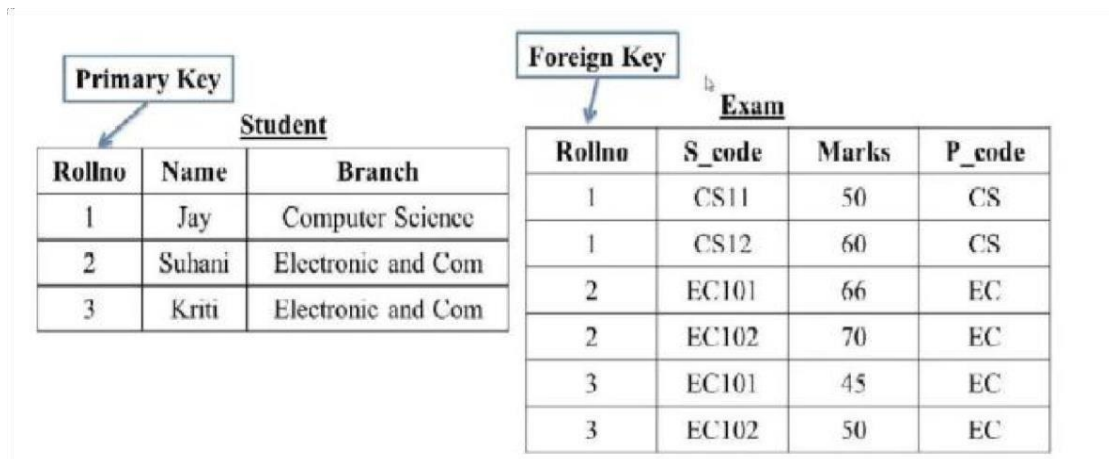
Basics of Database

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 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

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 ≤ 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

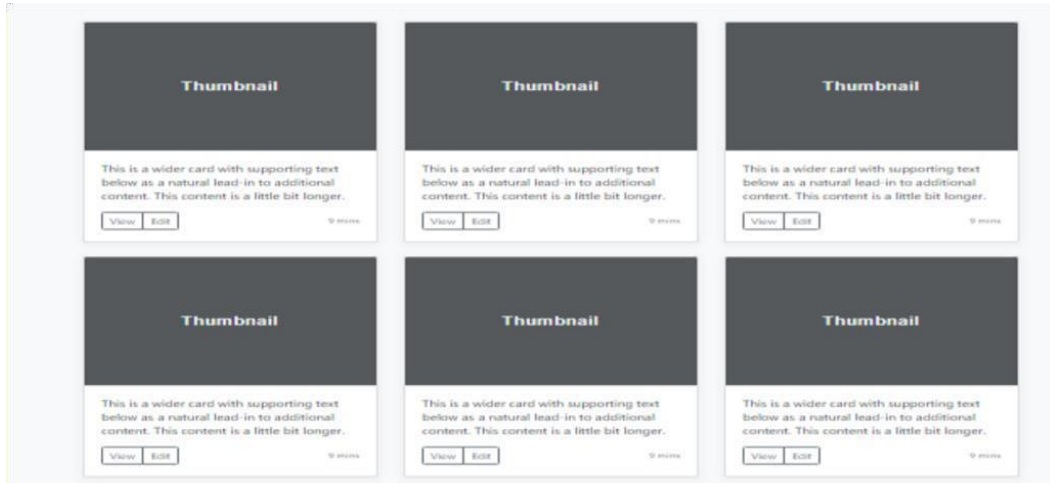
Term-1

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 (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

MODULE: 1

- HTML-CSS Login Registration page

MODULE: 2 (JavaScript Essentials)

- Calculate subtotal price of quantity in JavaScript?

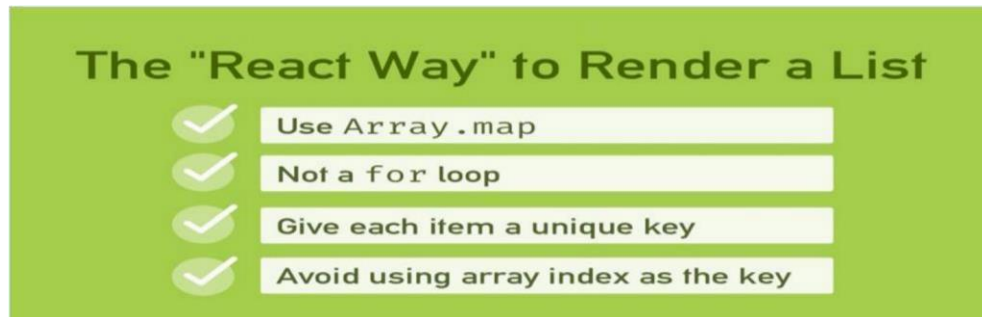
Product Info	Quantity	Price (per unit)	Price (subtotal)	
 Fortunata Window Hardware - Decorative Holdbacks - Mocha	2	\$29.99	\$59.98	Remove
 Woven Trellis Window Hardware - Clip Rings - Bronze	1	\$12.99	\$12.99	Remove
			\$72.97	

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

MODULE: 3 (JavaScript Essentials)

- 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?

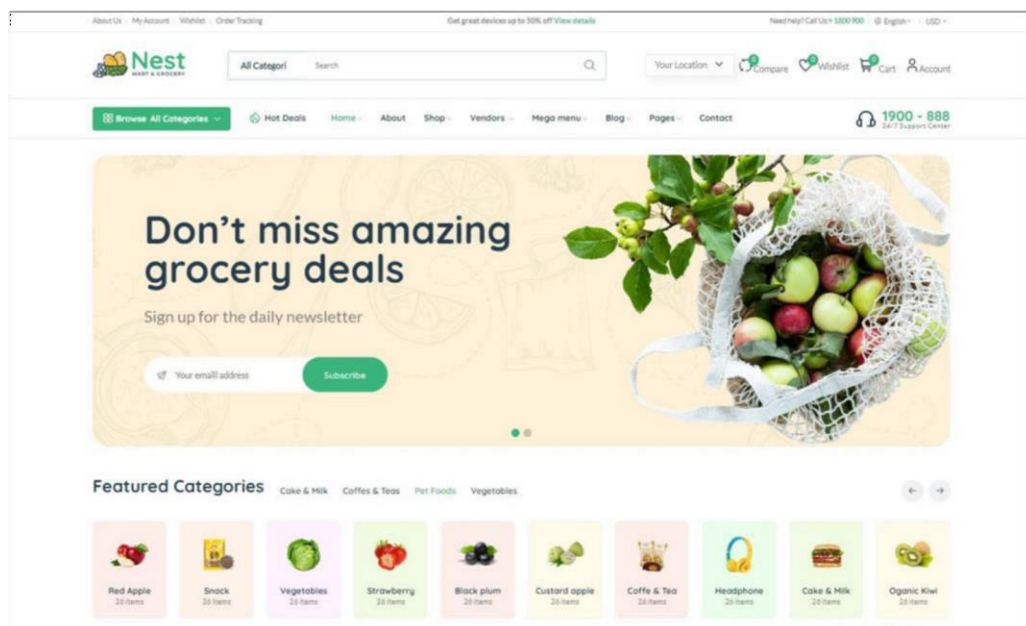


MODULE: 4 (List and Hooks)

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

MODULE: 5 (Styling & Advance React)

- Create Shopping site home page with Styled- component

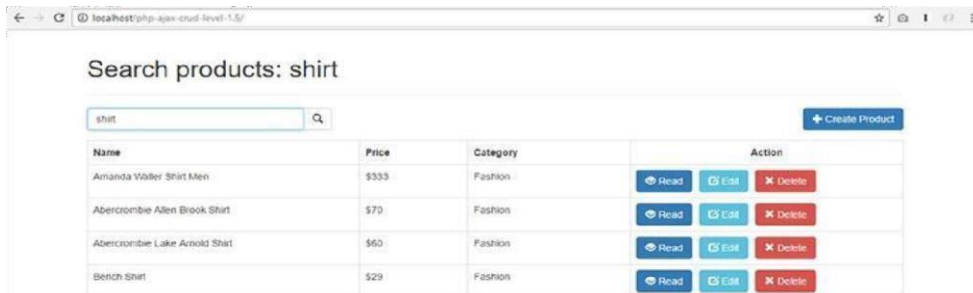


MODULE: 6 (React Router)

- 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?



The screenshot shows a web browser window with the URL 'localhost/php-ajax-crud-level-1.5/'. The page title is 'Search products: shirt'. Below the title is a search input field containing 'shirt' and a magnifying glass icon. To the right of the search field is a blue button labeled 'Create Product'. Below these elements is a table with the following data:

Name	Price	Category	Action
Amanda Waller Shirt Men	\$533	Fashion	Read Edit Delete
Abercrombie Allen Brook Shirt	\$79	Fashion	Read Edit Delete
Abercrombie Lake Arnold Shirt	\$60	Fashion	Read Edit Delete
Berich Shirt	\$29	Fashion	Read Edit Delete

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

Node JS Assignments

Module – 2: 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 – 3 : 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.
- User
 - Product category
 - Product
 - Order
 - 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 – 4: 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 – 5: 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.
- Create session management (login & logout)
 - Generate token while registration and login
 - Create logout from one device.
 - Create logout from all device.