

# MERN Stack Assignment

# **Software Engineering Assignment**

## **MODULE:**

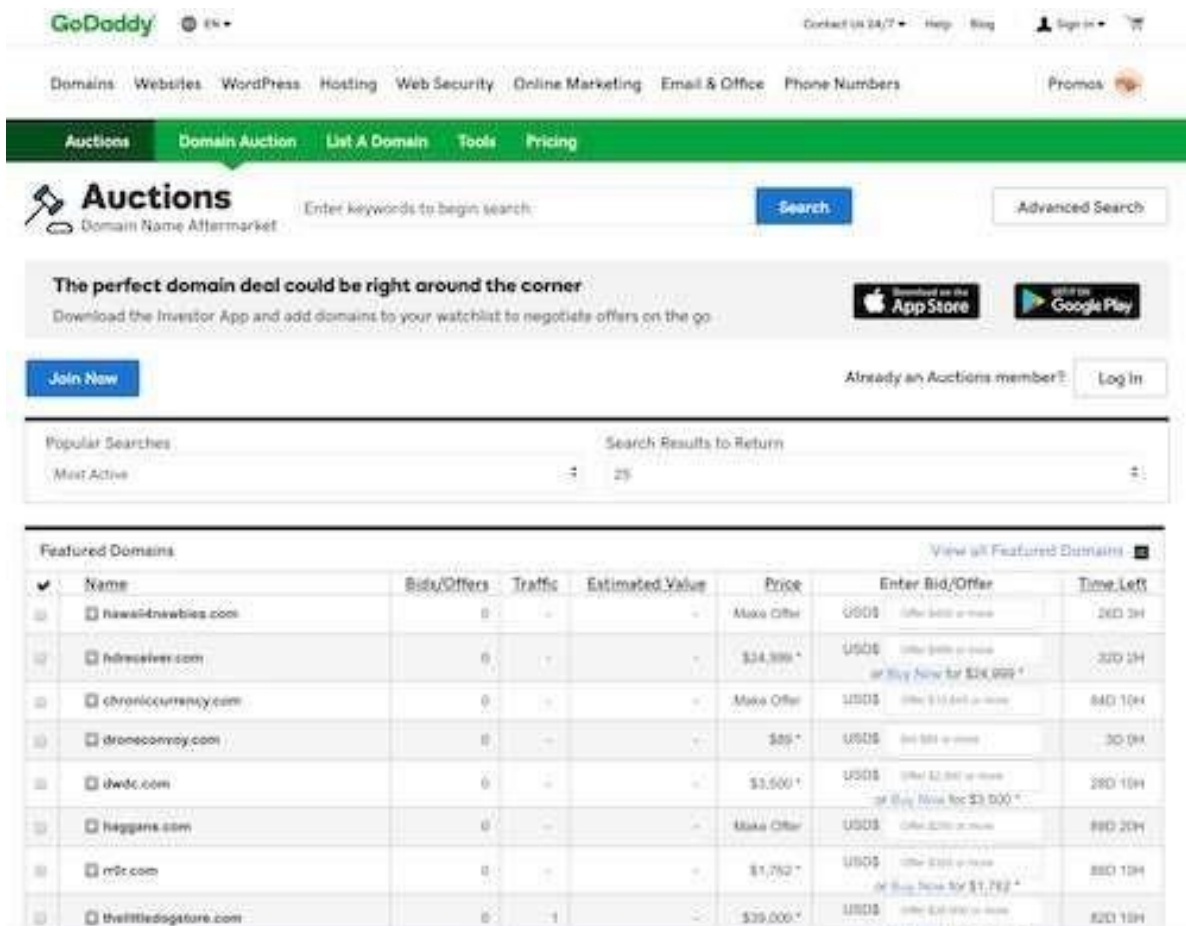
### **SE – Overview of IT Industry**

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.









# Front end Development

## Module – WD - HTML

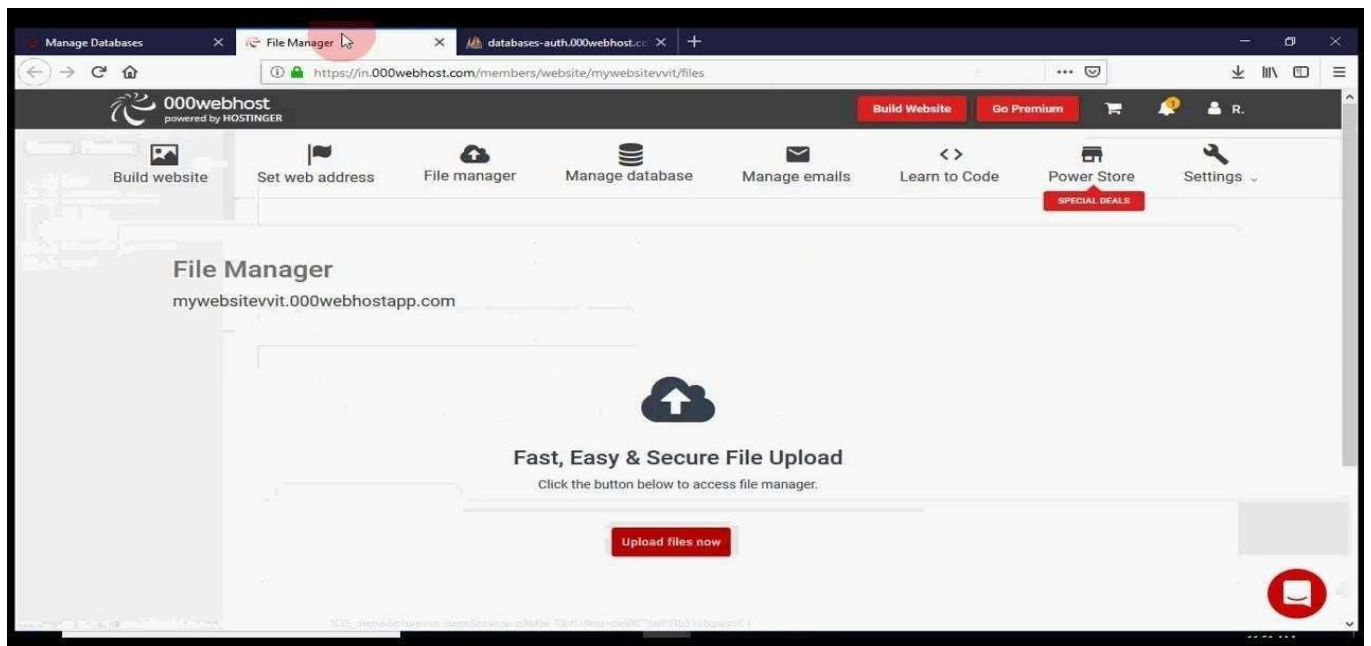
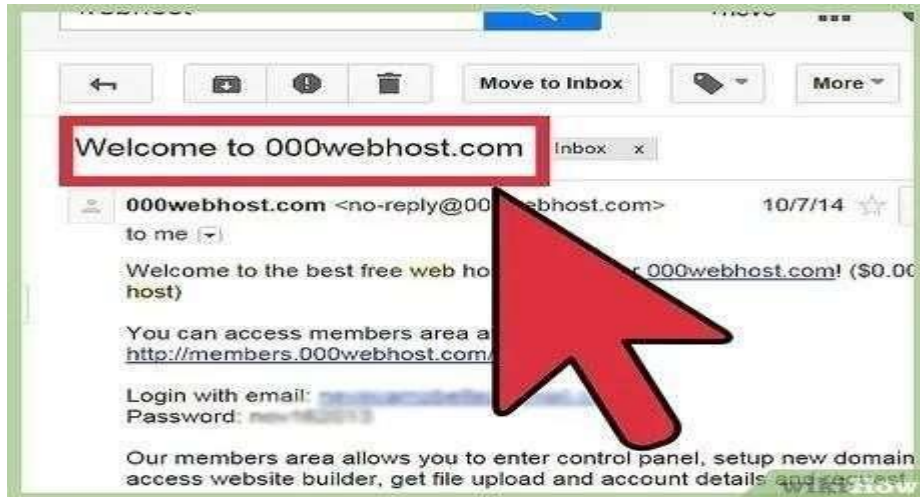
1) How to purchase domain ?



The screenshot shows the GoDaddy Domain Auctions interface. At the top, there's a navigation bar with links for Domains, Websites, WordPress, Hosting, Web Security, Online Marketing, Email & Office, and Phone Numbers. Below this is a green banner with 'Auctions', 'Domain Auction', 'List A Domain', 'Tools', and 'Pricing'. The main section is titled 'Auctions' with a search bar and a 'Search' button. Below the search bar, there's a promotional banner for the 'Investor App' and a 'Join Now' button. The 'Featured Domains' section is a table with columns for Name, Bids/Offer, Traffic, Estimated Value, Price, Enter Bid/Offer, and Time Left.

✓	Name	Bids/Offer	Traffic	Estimated Value	Price	Enter Bid/Offer	Time Left
	newinnewsbies.com	0	0	-	Make Offer	USD\$ Offer \$100 or more	26D 24H
	hdreeliver.com	0	0	-	\$34,999 *	USD\$ Offer \$100 or more or Buy Now for \$14,999 *	32D 15H
	chronicurrency.com	0	0	-	Make Offer	USD\$ Offer \$10,000 or more	84D 10H
	dronecomroy.com	0	0	-	\$89 *	USD\$ Offer \$100 or more	3D 19H
	dwdc.com	0	0	-	\$3,500 *	USD\$ Offer \$2,000 or more or Buy Now for \$3,500 *	28D 15H
	haggans.com	0	0	-	Make Offer	USD\$ Offer \$100 or more	88D 20H
	nrk.com	0	0	-	\$1,792 *	USD\$ Offer \$100 or more or Buy Now for \$1,792 *	88D 10H
	thetitledogature.com	0	1	-	\$39,000 *	USD\$ Offer \$10,000 or more or Buy Now for \$39,000 *	82D 10H

2) Upload one page on server using Free server hosting [000webhost.com]




3) of student management system

4) Upload your code in Github using command.

- Create below example using HTML .


<a href="#">Home</a>	<a href="#">about</a>	<a href="#">contact</a>	<a href="#">help</a>	<a href="#">store</a>	<a href="#">contact us</a>
----------------------	-----------------------	-------------------------	----------------------	-----------------------	----------------------------



contact-us page

## Contact Us

first-name <input type="text" value="Enter your name"/>	last-name <input type="text" value="Enter your name"/>
Email-id <input type="text" value="enter your email id"/>	Phone-no <input type="text" value="enter your phone no"/>
city <input type="text" value="Ahmedabad"/>	Gender <input type="radio"/> MALE <input type="radio"/> FEMALE <input type="radio"/> OTHER



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Watch later Share

Get **Job** ready

Watch on YouTube

- Create employee registration webpage using HTML form objects



# TOPSTECHNOLOGIES

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## Employee Registration Form

☒ Mr. ☐ Mrs. ☐ Ms.

First Name

Last Name

Mail Address1

Mail Address2

City

State

Gujarat ▼

Zip

Upload Photo

No file selected.

E-Mail

Mobile

+91

Languages known

☒ Gujarati

☒ Hindi

☒ English

☐ Marathi

Additional Information

Optional

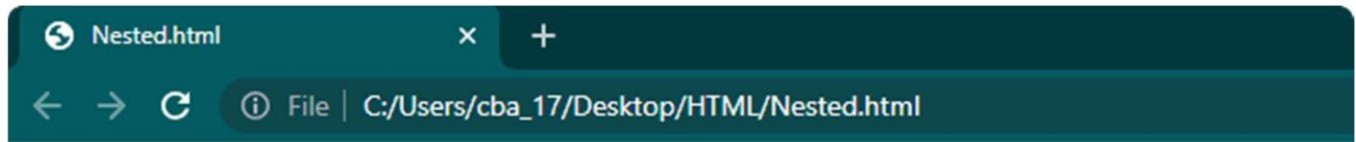


- Create webpage using list tags of HTML

## Learning Web Development

- I. Background Skills
  - A. Unix Commands
  - B. Vim Text Editor
- II. HTML
  - A. Minimal Page
  - B. Headings
  - C. Tags
  - D. Lists
    - i. Unordered
    - ii. Ordered
    - iii. Definition
    - iv. Nested
  - E. Links
    - i. Absolute
    - ii. Relative
  - F. Images
- III. CSS
  - A. Anatomy
  - B. Basic Selectors
    - i. Element
    - ii. Class
    - iii. ID
    - iv. Group
  - C. The DOM
  - D. Advanced Selectors
  - E. Box Model
- IV. Programming
  - A. Python
  - B. JavaScript
- V. Database
  - A. Flat File
  - B. Relational

- create this using nested table



Device	Brand	Specifications	
Smartphone	Apple	Model	Storage
		iPhone 12 Pro	256GB
		iPhone SE	128GB
Laptop	HP	15.6" Display	
Tablet	Samsung	10.5" Display	



- create layout using html table



Invoice #9876543210		15 September 2020	
<b>Pay to:</b> Acme Billing Co. 123 Main St. Cityville, NA 12345		<b>Customer:</b> John Smith 321 Willow Way Southeast Northwesternshire, MA 54321	
Name / Description	Qty.	@	Cost
Paperclips	2000	0.02	20.00
Staples (box)	200	2.00	200.00
<b>Subtotal</b>			<b>220.00</b>
<b>Tax</b>		<b>9%</b>	<b>19.80</b>
<b>Grand Total</b>			<b>239.80</b>

- creating form using table

<b>Registration</b>		
<b>Personal Details</b>		
<b>Full Name</b> <input type="text"/>	<b>Father Name</b> <input type="text"/>	<b>Mother Name</b> <input type="text"/>
<b>Date of Birth</b> <input type="text"/>	<b>Full Name</b> <input type="text"/>	<b>Email</b> <input type="text"/>
<b>Mobile Number</b> <input type="text"/>	<b>Gender</b> <input type="text"/>	<b>Address</b> <input type="text"/>
<hr/>		
<b>Other Details</b>		
<b>Stream</b> <input type="text"/>	<b>Previous Class</b> <input type="text"/>	<b>Hobbies</b> <input type="text"/>
<b>Account Number</b> <input type="text"/>	<b>Religion</b> <input type="text"/>	<b>Category</b> <input type="text"/>
<input type="button" value="Submit"/>		

## Module WD - CSS and CSS 3

- Create image gallery using display grid with responsive

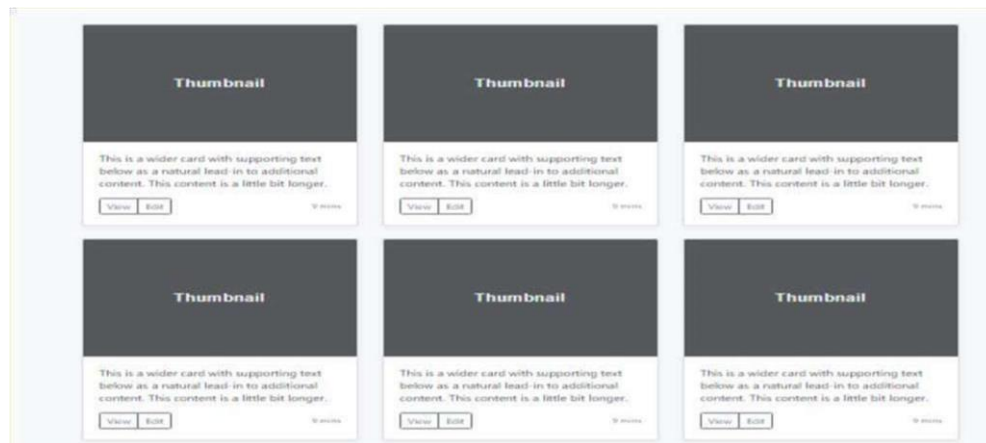


- Create below example with the help of clip path



- Create Layouts

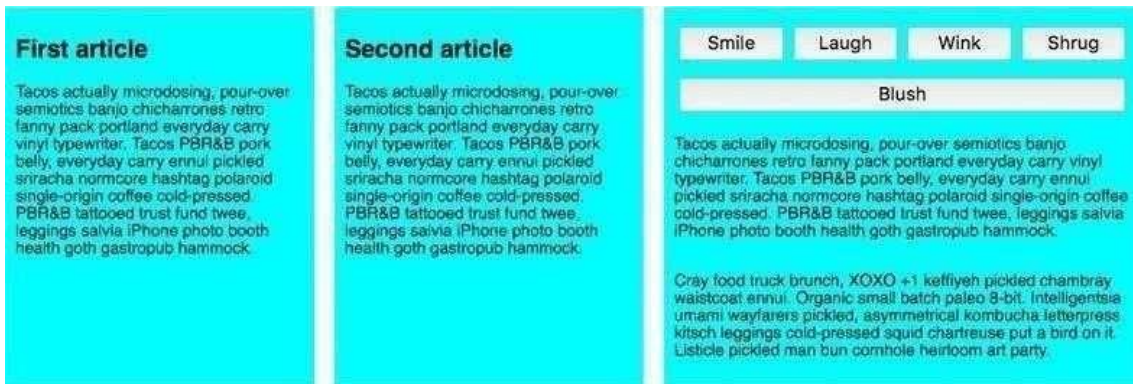
- 



layout using html and css include media query



create this using flex



## Module - Website Designing - HTML5

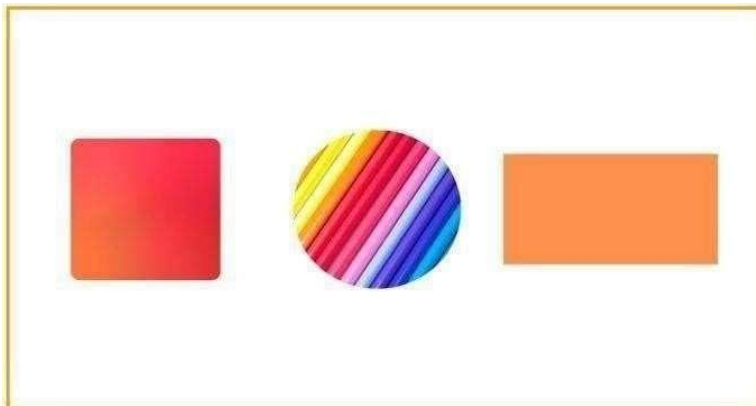
- create this using video tag



- create some audio file like this in html 5

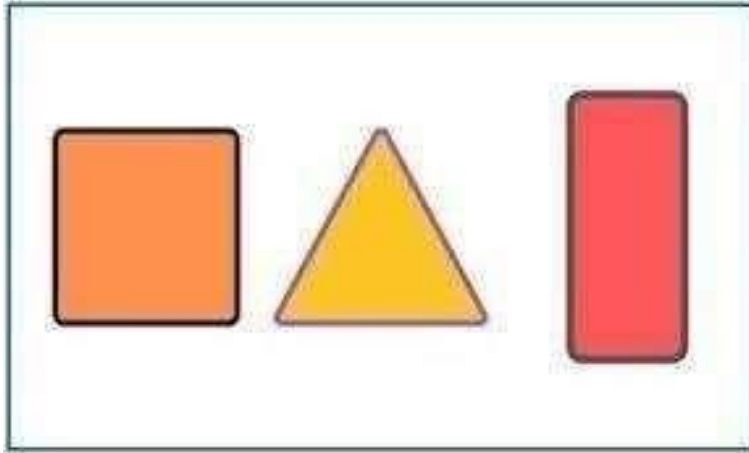


- create some shape using canvas tag in html





- create some shape using svg tag in html



# Module - WD - JavaScript Essentials & Advanced

Q.1 Using `console.log()` print out the following statement: The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another. Using `console.log()` print out the following quote by Mother Teresa: Q.2 Check if `typeof '10'` is exactly equal to 10. If not make it exactly equal?

3. Write a JavaScript Program to find the area of a triangle?
4. Write a JavaScript program to calculate days left until next Christmas?
5. What is Condition Statement?
6. Find circumference of Rectangle formula :  $C = 4 * a$  ?
7. WAP to convert years into days and days into years?
8. Convert temperature Fahrenheit to Celsius? (Conditional logic Question)
9. Write a JavaScript exercise to get the extension of a filename.?
10. What is the result of the expression  $(5 > 3 \ \&\& \ 2 < 4)$ ?
11. What is the result of the expression  $(true \ \&\& \ 1 \ \&\& \ "hello")$ ?
12. What is the result of the expression  $true \ \&\& \ false \ || \ false \ \&\& \ true$ ?
13. Check Number Is Positive or Negative in JavaScript?
14. Find the Character Is Vowel or Not ?
15. Write to check whether a number is negative, positive or zero?
16. Write to find number is even or odd using ternary operator in JS?
17. Write find maximum number among 3 numbers using ternary operator in JS?
18. Write to find minimum number among 3 numbers using ternary operator in JS?
19. Write to find the largest of three numbers in JS?
20. Write to show
  - i. Monday to Sunday using switch case in JS?
  - ii. Vowel or Consonant using switch case in JS?

(Conditional looping logic Question)

21. What are the looping structures in JavaScript? Any one Example?
22. Write a print 972 to 897 using for loop in JS?
23. Write to print factorial of given number?
24. Write to print Fibonacci series up to given numbers?
25. Write to print number in reverse order e.g.: number = 64728 ---> reverse =82746 in JS?
26. Write a program make a summation of given number (E.g., 1523 Ans: - 11) in JS?
27. Write a program you have to make a summation of first and last Digit. (E.g., 1234 Ans: - 5) in JS?
28. Use console.log() and escape characters to print the following pattern in JS?
- ```
1 1 1 1 1
2 1 2 4 8
3 1 3 9 27
4 1 4 16 64
5 1 5 25 125
```
29. Use pattern in console.log in JS?
- 1)
- ```
1
1 0
1 0 1
1 0 1 0
1 0 1 0 1
```
- 2)
- ```
A
B C
D E F
G H I J
K L M N O
```
- 3)
- ```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

4) \*

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

Q.30 Accept 3 numbers from user using while loop and check each numbers  
palindrome Q.31 Write a JavaScript Program to display the current day and time in the  
following format. Sample Output: Today is Friday. Current Time is 12 PM: 12 : 22 2 ?

32. Write a JavaScript program to get the current date?
33. Write a JavaScript program to compare two objects?
34. Write a JavaScript program to convert an array of objects into CSV string?
35. Write a JavaScript program to capitalize first letter of a string?
- Q. 45 Write a JavaScript program to determine if a variable is array?
46. Write a JavaScript program to clone an array?
47. What is the drawback of declaring methods directly in JavaScript objects?
48. Print the length of the string on the browser console using console.log()?
49. Change all the string characters to capital letters using toUpperCase() method?
50. What is the drawback of declaring methods directly in JavaScript objects?
51. Write a JavaScript program to get the current date. Expected Output : mm-dd- yyyy,  
mm/dd/yyyy or dd-mm-yyyy, dd/mm/yyyy?
52. Use indexOf to determine the position of the first occurrence of a in 30 Days Of  
JavaScript?



Q,53 Use lastIndexOf to determine the position of the last occurrence of a in 30 Days Of  
JavaScript?

54. Form Validtion in JS?
55. Form in Email, number, Password, Validation?
56. Dynamic Form Validation in JS?
57. how many type of JS Event? How to use it ?
60. What is Bom vs Dom in JS?
61. Array vs object defences in JS?
62. Split the string into an array using split() Method?
63. Check if the string contains a word Script using includes() method?
64. Change all the string characters to lowercase letters using toLowerCase() Method.
65. What is Character at index 15 in '30 Days of JavaScript' string? Use charAt() method.
66. copy to one string to another string in JS?

- Create basic math operation in JS

### Maths Operations

Enter 1st number :

Enter 2nd number :

+

-

\*

/

%

Answer is : 55



- Create result

## Marksheet for Information Technology

Enter Marks

1. C Language	<input type="text" value="34"/>
2. C++ Language	<input type="text" value="44"/>
3. Database	<input type="text" value="22"/>
4. HTML	<input type="text" value="33"/>
5. CSS	<input type="text" value="45"/>
6. php	<input type="text" value="44"/>
7. Core java	<input type="text" value="50"/>

Result

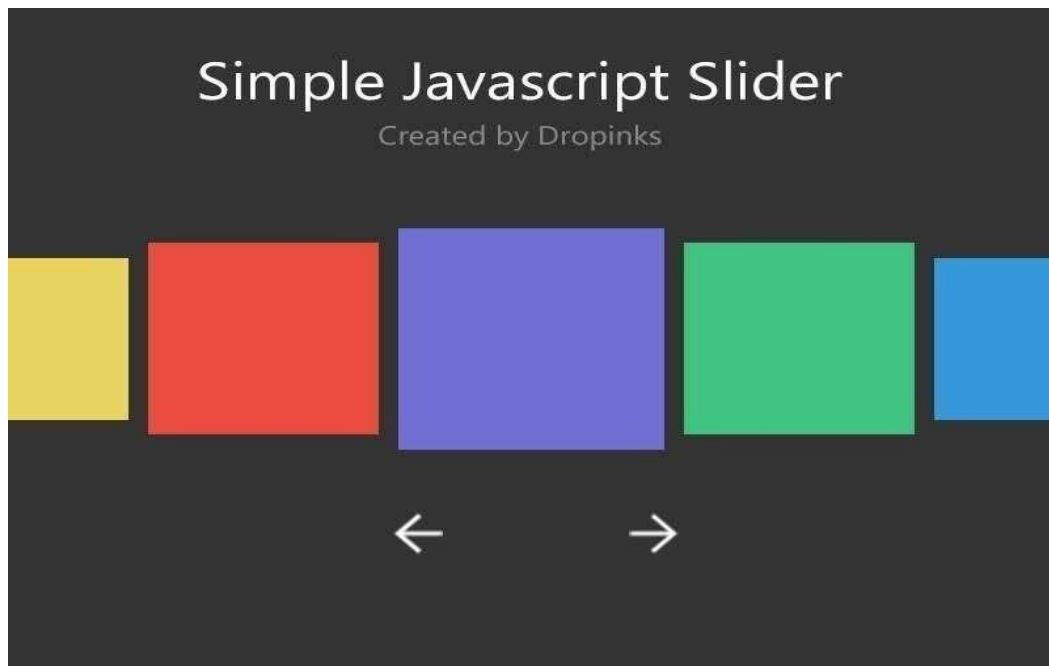
Total is : 272 / 350

Percentage is : 78 %



- Create a slider using JavaScript





- Change background using java script



- Create a hide show password functionalities.



The image shows a user interface for a login form. It consists of two input fields stacked vertically on a blue background. The top input field contains a series of dots, indicating a password, and has an eye icon to its right. The bottom input field contains the text '3dZhZge9qELaNEp' and has a key icon to its right. Both icons are used to toggle the visibility of the password.

- Create a form and apply validations as shown in below example.

## Sign Up

Username:

Username must be between 3 and 25 characters.

Email:

Password:

Password must have at least 8 characters that include at least 1 lowercase character, 1 uppercase character, 1 number, and 1 special character in (!@#\$%^&\*)

Confirm Password:

Please enter the password again

**SIGN UP**

- Create basic math operation in JS

## Maths Operations

Enter 1st number :

Enter 2nd number :

Answer is : 55

- Create result

## Marksheet for Information Technology

Enter Marks

1. C Language

2. C++ Language

3. Database

4. HTML

5. CSS

6. php



7. Core java

Total is : 272 / 350

Percentage is : 78 %

## JavaScript

- Calculate subtotal price of quantity show in below image

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

- Create below form and do apply validation show in below image

# Form Validation JavaScript

### Form Validation

Full Name

Email Address

Password  
  
Enter your password

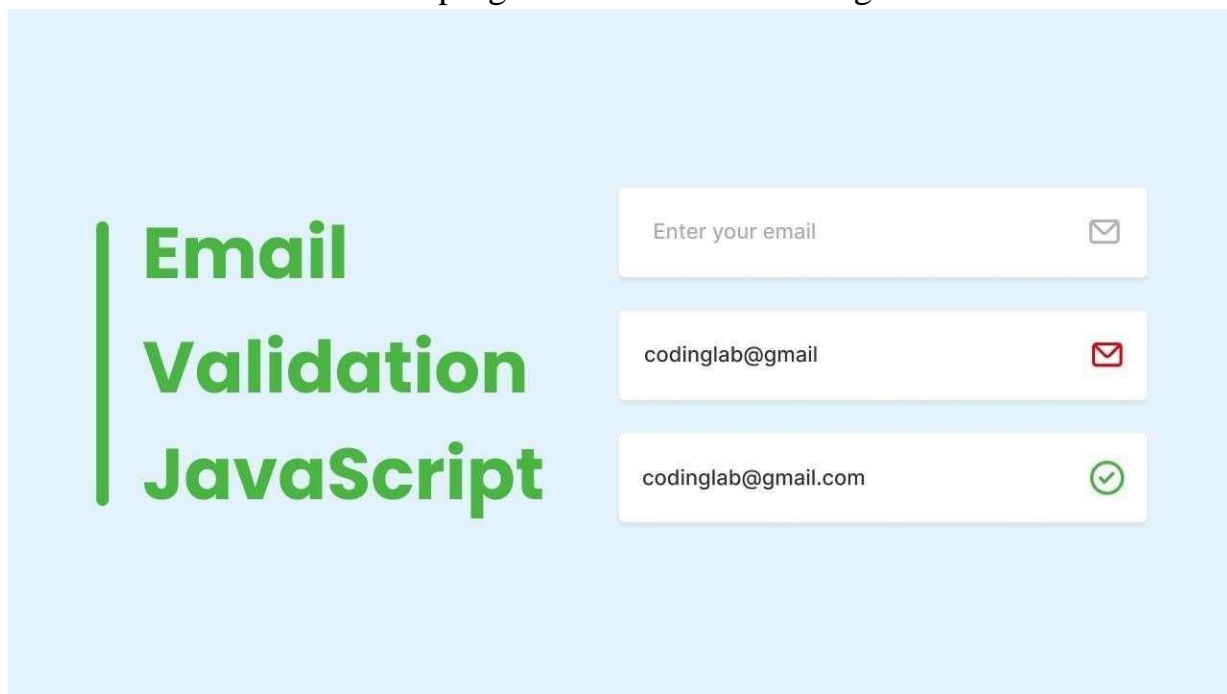
Birth Date  
  
Select your date of birth

Gender  
  
Select your gender

- Create two containers and drag from one to another show in below image



- Create Email validation program show in below image

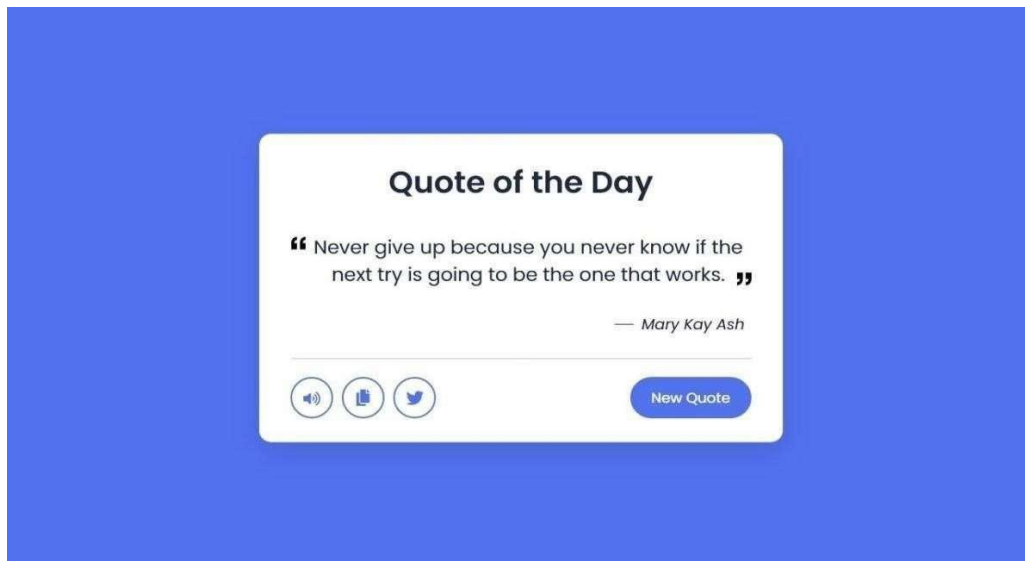




- Create Password Strength checker show in below image



- Create program to generate Random quote show in below image program to Export html table to excel show in below image



- Create

Name	Age	Country
------	-----	---------

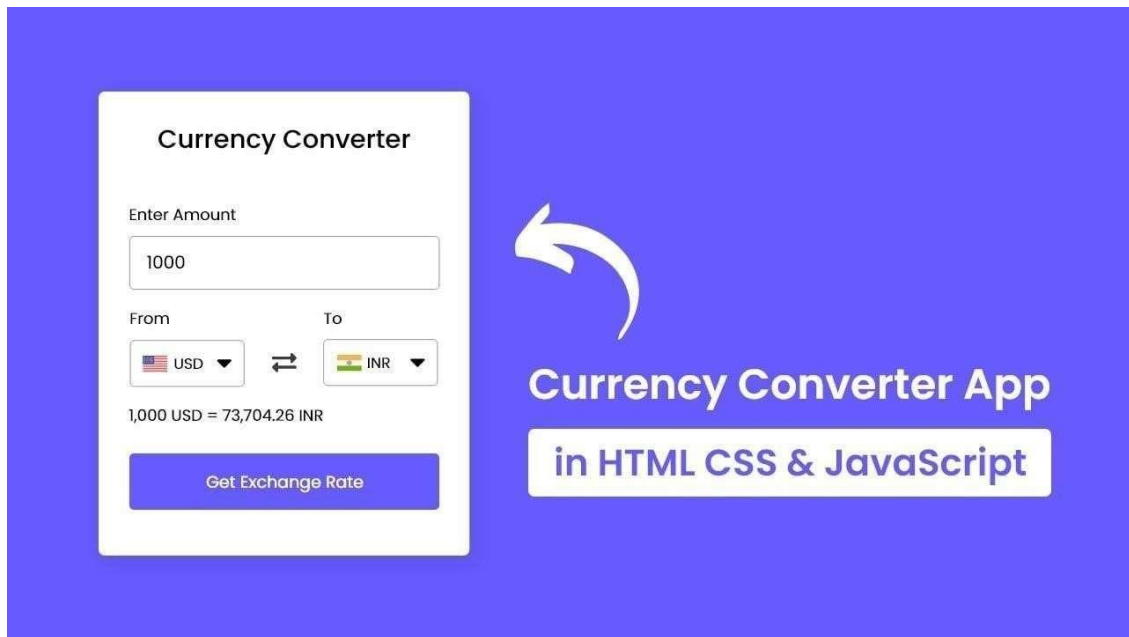
Alice	30	USA
-------	----	-----

Bob	25	UK
-----	----	----

Charlie	35	Canada
---------	----	--------

Export to Excel

- Create Currency converter show in below image



Delay function result using debouncing

---

You typed: hi


- Achieve Throttling using below example (on mouse over display mouse coordinates.)

- Create

Mouse coordinates: 324, 17

Simple Alarm Clock show in below image

## Build An Alarm Clock JavaScript



04:20:01 PM

Hours Minute AM/PM

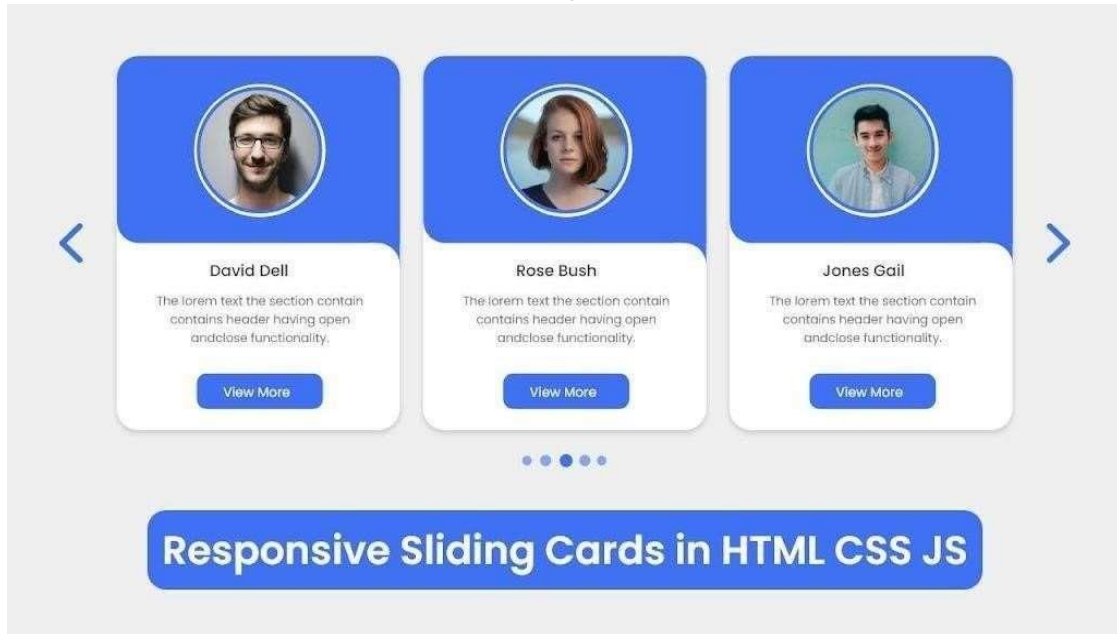
Set Alarm

- Create Responsive Light box Gallery shown in below image



- Create

review Card slider shown in below image



- Create Login Logout system shown below



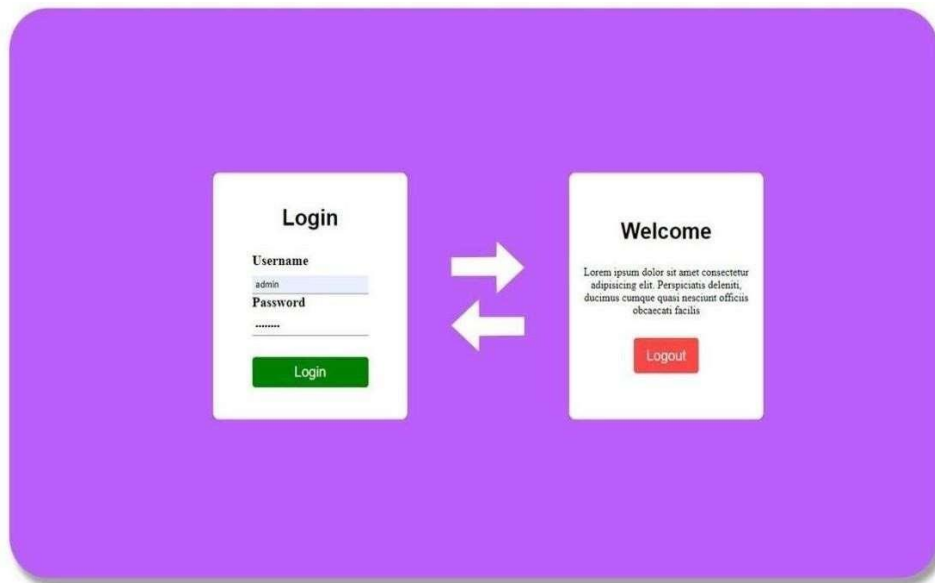
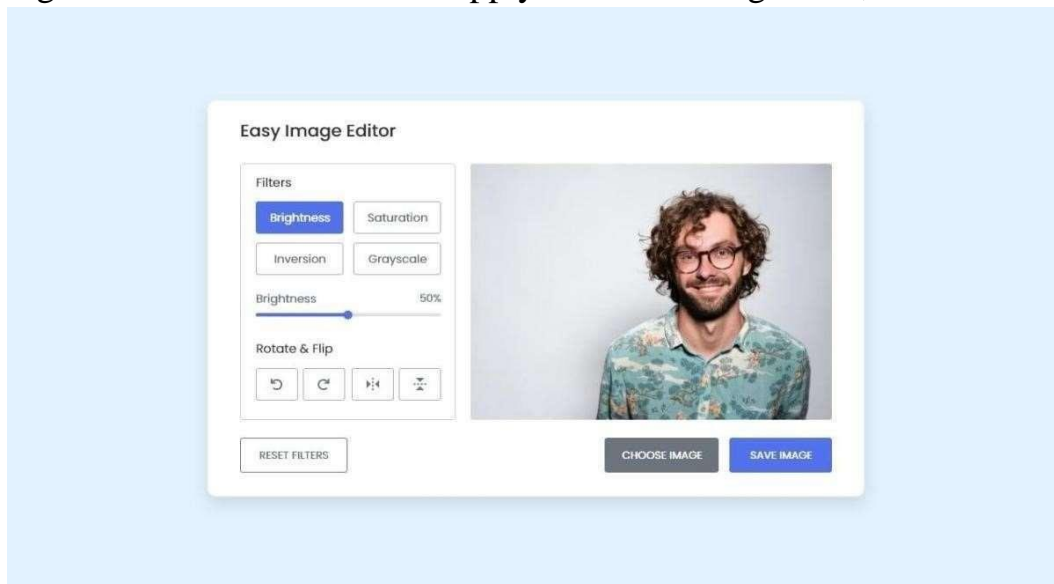


Image Editor shown below and apply filters like brightness,contrast etc.



- Perform Localstorage CRUD as below

- Create

## CRUD with LocalStorage

Add Item

### Items:

Apple

Edit

Delete

milk

Edit

Delete

banana

Edit

Delete

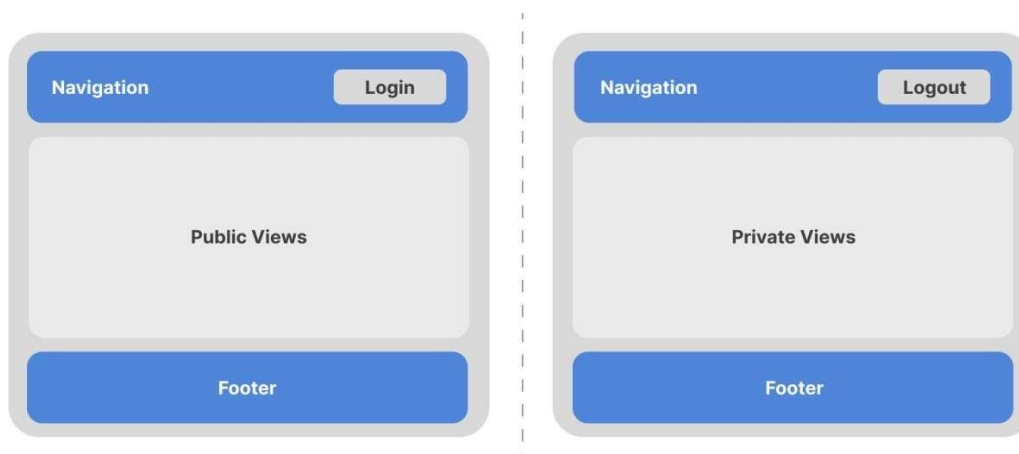
bread

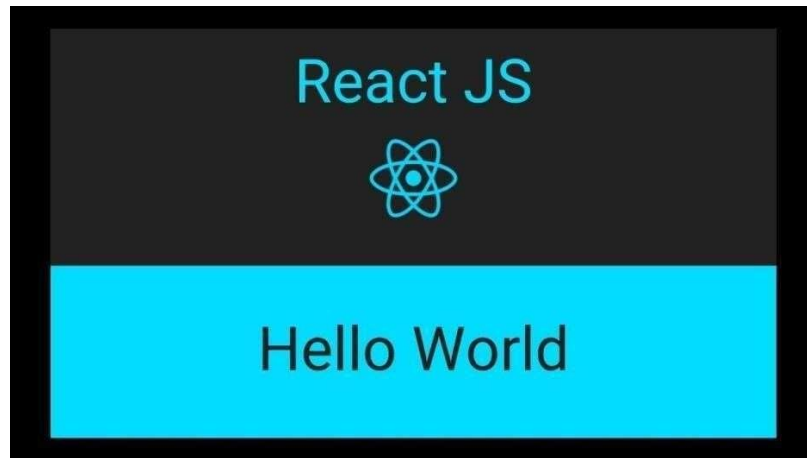
Edit

Delete

## Module – ReactJs ,Components , states ,props

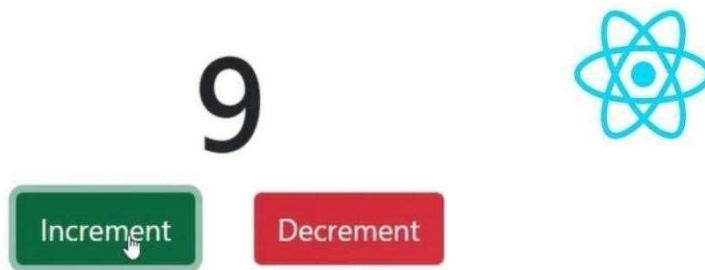
- Create Hello World React program show below





Create counter app program shown below

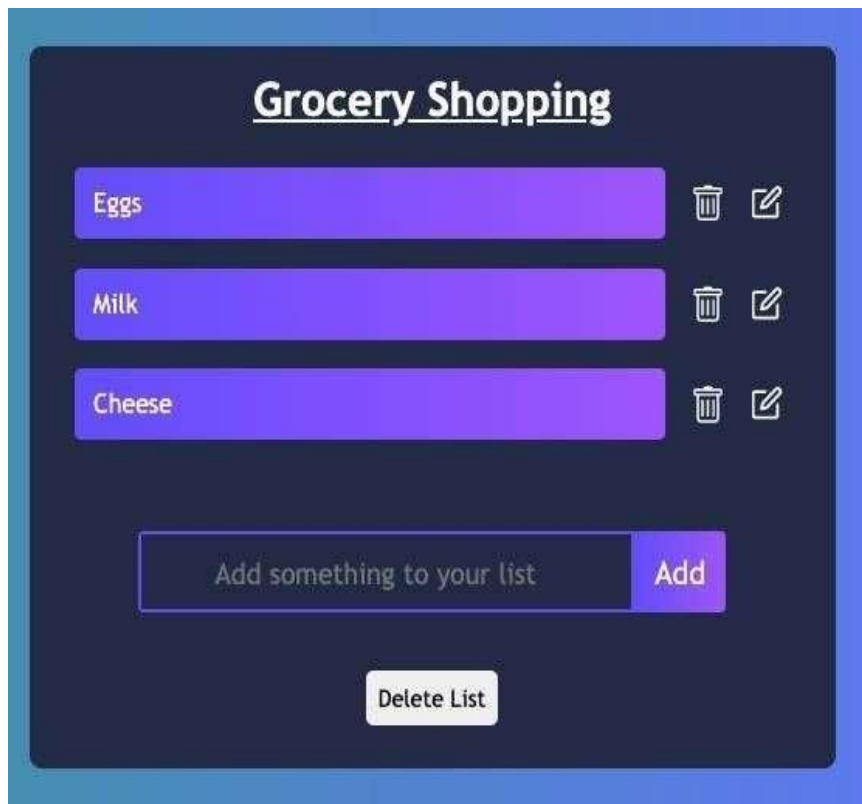
## Counter App



- Create Login Lout React program as below

# Module – Lists , Hooks , Localstorage, Api Project

Create TODO app show in image  
below



- How to Create a List View in React Js?

Cre  
bel

## The "React Way" to Render a List



Use `Array.map`



Not a `for` loop

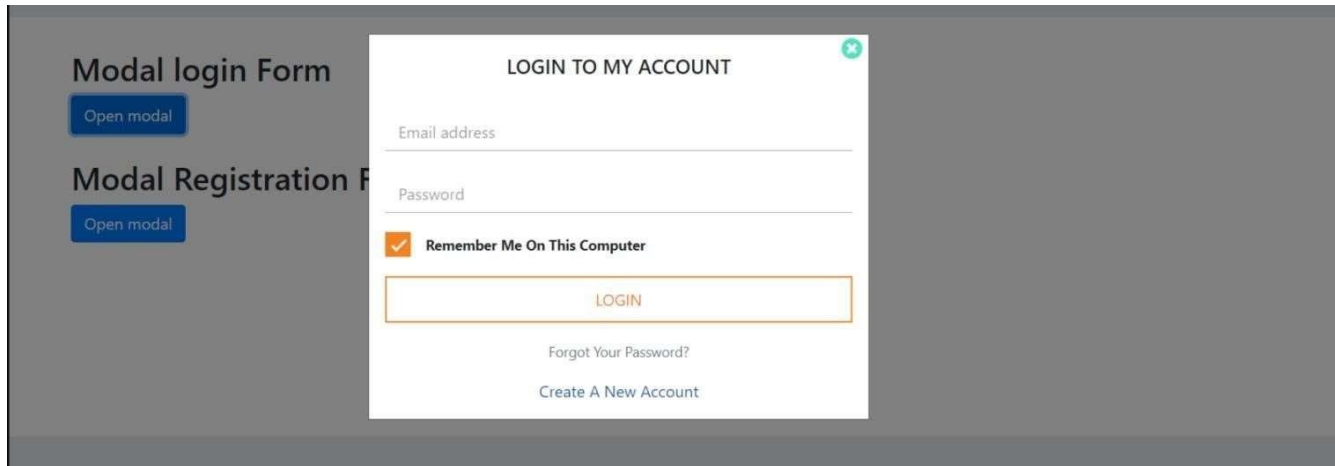


Give each item a unique key

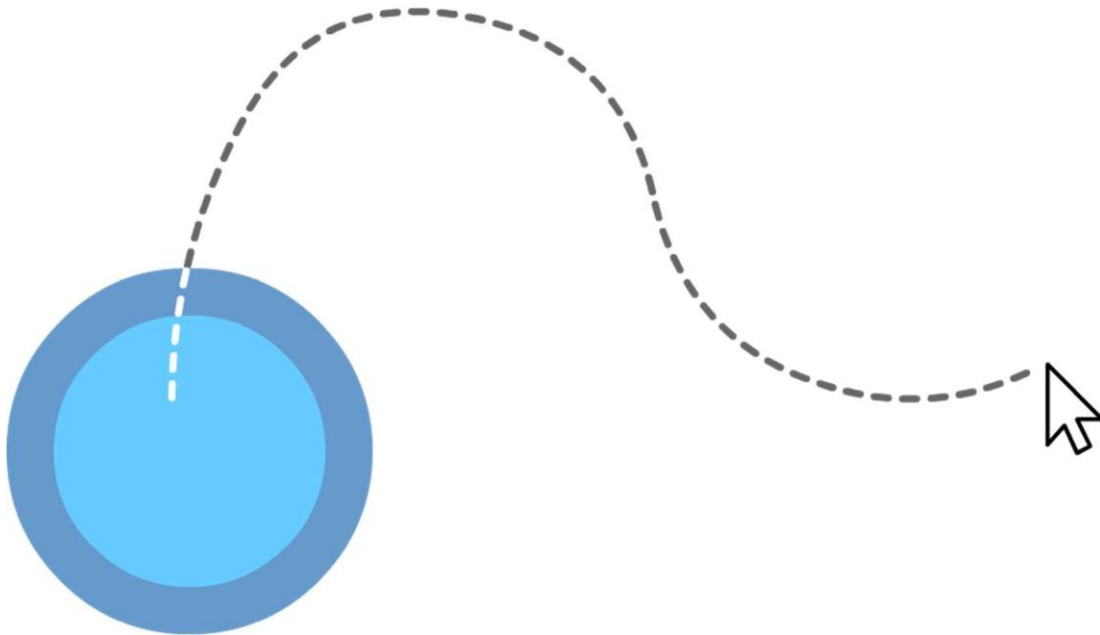


Avoid using array index as the key

- Create modal for Login and Registration show in below image.

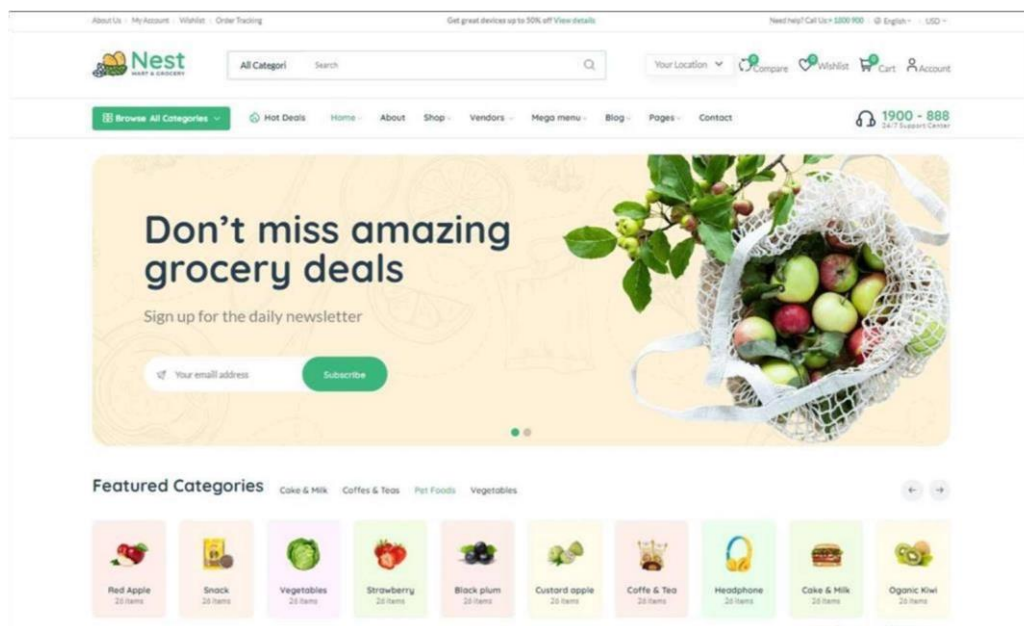


- Move an element on mouse move using useState OR useEffect Hook

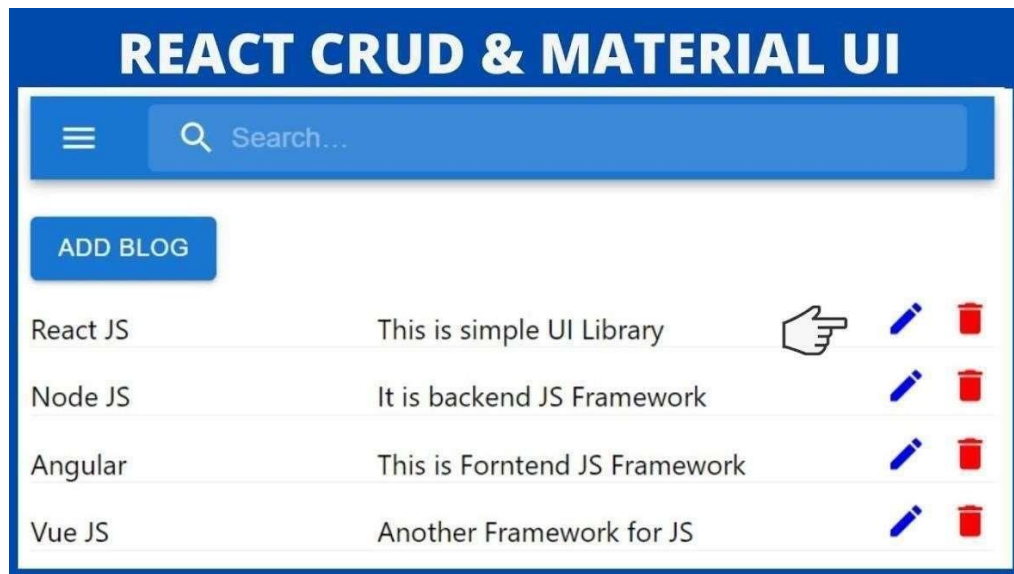


# Module -React -Advance React- Styling, Routing

- Create Shopping site home page with Styled- component



- Perform crud using Fake API and Material UI React Router



## **Module React – JSON-server and Firebase Real Time Database**

- Create React app with modules and lazy loading (Admin-user module with child router and outlet)
- Perform Crud operation using json-server,axios,router



# React Crud Operation {JSON Server}

API

Axios

Router

Add User			
User First Name	User Last Name	User Email	Actions
beta	alpha	beta@knf.com	<button>Update</button> <button>Delete</button> <button>View</button>
alpha	gama	alpha@knf.com	<button>Update</button> <button>Delete</button> <button>View</button>
tera	tera	tera@gmail.com	<button>Update</button> <button>Delete</button> <button>View</button>



## Module - React - Applying Redux

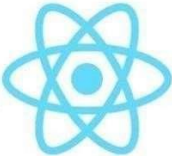



- Create app for Redux counter as shown below?

# Heloo redux

Count: 1

Increment Decrement

- Create CRUD using Redux-thunk , Json-server,axios,router



REACT CRUD APP JSON-SERVER  
WITH REDUX-THUNK

Name	Email	Contact	Address	Action
Adam Marcus	adam123@gmail.com	83673677367635	UK	<button>DELETE</button> <button>EDIT</button>
Tommy	tom@gmail.com	83786646476	Japan	<button>DELETE</button> <button>EDIT</button>
James Bond	james@gmail.com	9484785787	France	<button>DELETE</button> <button>EDIT</button>
Larry	larry@gmail.com	347846746	UK	<button>DELETE</button> <button>EDIT</button>
Steve	steve@gmail.com	9348848887	Aus	<button>DELETE</button> <button>EDIT</button>

- Create a Single page application as show below.
- Create this portfolio page with at least three pages those all pages shold be openedwithout refreshing the page also apply dark light there on toggle button .



# **Node JS Assignments**

## **Module 13 – : Node - Introduction**

- Q1. What is difference b/w JS and Node JS
- Q2. Create a server using HTTP module.
- Q3. Create Calculator function using local module

## **Module 14 – : Node - Node with Mongodb**

- Q1. What is MongoDB.
- Q2. What is difference between mongo DB and SQL
- Q3. Create database for online shopping app.
  - i. User
  - ii. Product category
  - iii. Product
  - iv. Order Review
- Q4. Create Require collections for online shopping app and documents.
- Q5. Write down syntax for insert data
- Q6. How can I list all data from mongodb.
- Q7. How can I update data from mongodb.
- Q8. Write command to show all data from product collections and sort in ascending order.
- Q9. Update product price for particular product.
- Q10. Write command to delete particular document and collection.

# **Node JS Assignments**

## **Module 15 – : Node – Introduction to Express JS**

**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

## **Module 16 – : Structuring REST API**

Q1. Create Rest API (get, post, delete, put, patch) for Task management.

Q2. What is Middleware in Express.js?

Q3 . What is json web tokens?

Q4. What is different between encryption and hashing.

## **Module 17 – : Node – Integration With FrontEnd**

Q1. Create API for Frontend App.

- 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.

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