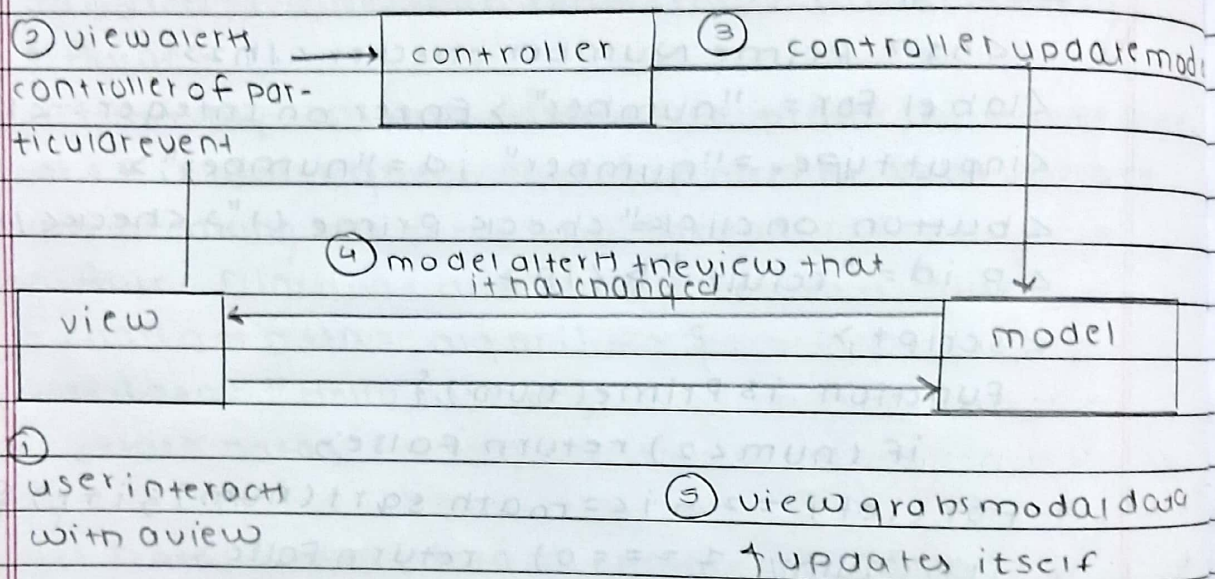


## ASSIGNMENT :- 03.

Q.1. What is mvc? Explain mvc architecture in detail.

→ The model-view-controller (mvc) is an architectural pattern that separates an application into three main logical components, the model, the view and the controller.

• mvc architecture :-



\* mvc architecture.

1) Normally in mvc architecture, when a user enters a URL in the browser, it goes to the webserver & routed to a controller.

2) A controller executes related view & models for that request & create the response & sends it back to the browser.

3) First when user interacts with view through browser or some client.

4) view send alert to controller about particular event happened on view.

5) controller takes event details, it calls the model and gather the requested data & update



the model.

Q.2. Explain event binding & property binding in angular with example ?

→ • Event binding:-

- Data flows from the DOM to the component.
- When a DOM event, such as a click, is triggered, the bound method from the component is called.

- Eg. `<button (click) = "sayHi()"> Hi </button>` -  
The `sayHi()` method will be called so it needs to be defined in the component class. We use parentheses for event binding.

• Property binding:-

- Data flows from the component to a property of an element in the DOM.
- It is used to bind a component member variable to an attribute of a DOM such as the value attribute of an `<input>` tag.

- eg. `<h1> Example of Property Binding </h1>`

`<img [src] = "imgUrl">`

`<button [disabled] = "isDisabled"> you cannot click here </button>`

Q.3. Explain different types of Hooks in ReactJS?

→ 1) `useState()` hook:-

- The state of your application is bound to change at some point. This could be the value of a variable, an object or whatever type of data exists in your component.

eg. `import React, { useState } from 'react';`



```

function countApp() {
  const [count, setCount] = useState(0);
  return (
    <div>
      <p> You clicked {count} times </p>
      <button onClick={() => setCount(count + 1)}>
        Click me
      </button>
    </div>
  );
}

export default countApp;

```

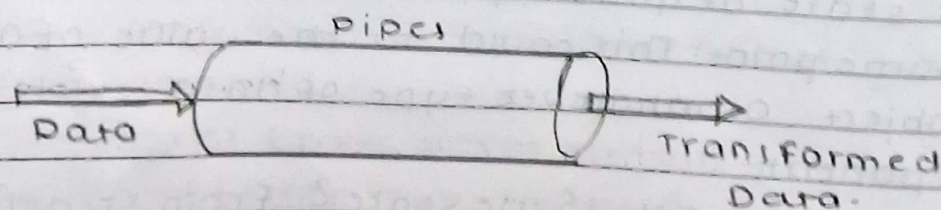
2) Use Effect Hook :-

- useEffect is short for 'use side effect'. Use Effect Hook is used to eliminate the side effects of using class-based components.

Q.4. What is Pipe? Explain with example.

→ 1) Angular Pipe allows its users to change the format in which data is being displayed on the screen.

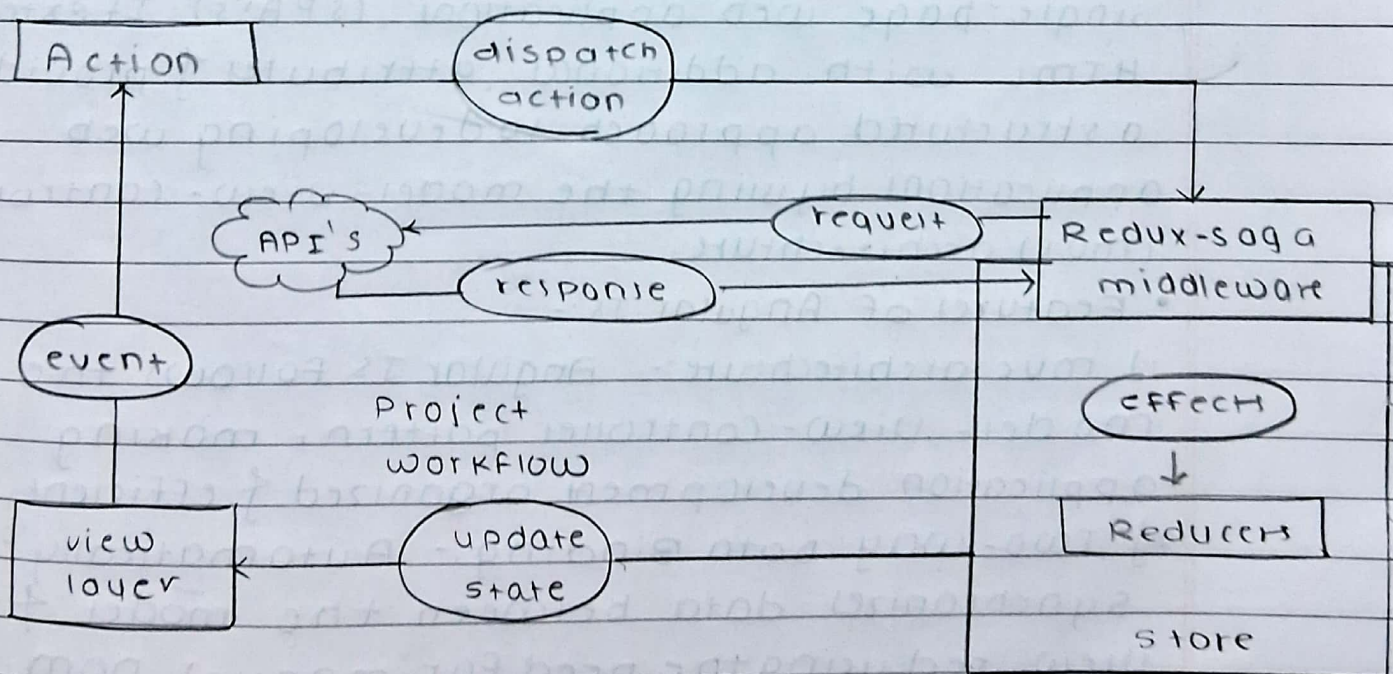
2) For instance, consider the date format. Dates can be represented in multiple ways, and the user can decide which one to use with the help of Angular Pipe.





- 3.) Pipes are simple functions designed to accept an input value, process and return a transformed value as the output.
- 4.) Angular pipes transform the output.
- 5.) You can think of them as makeup room where they beautify the data.
- 6.) Some salient features include:-
  - a.) Pipes are defined using the pipe "|" symbol.
  - b.) Pipes can be chained with other pipes.
  - c.) Pipes can be provided with arguments by using the colon (:) sign.
- 7.) eg. `<h3> The name of the product is {{name | uppercase}} </h3>`

Q5. Explain Redux - Architecture in detail.



\* Redux architecture with Redux-Saga.

- 1.) Redux architecture revolves around a strict unidirectional data flow.



2.) This means that all data in an application follows the same lifecycle pattern, making the logic of your map more predictable & easier to understand.

3.) React:- redux provides a store which makes the state inside component easier to maintain.

4.) store:- It contains the state of the component which need to be passed to other components.

5.) Actions:- The action part of the react-redux basically contains the different actions that are to be performed on the state present in store.

Q. 6



What is Angular JS? Explain its features?

Angular JS is an open-source JavaScript framework developed by Google for building dynamic, single-page web applications (SPA's). It extends HTML with additional attributes & providing a structured approach to developing web applications by using the model-view-controller (mvc) architecture.

• Features of Angular JS:-

1.) mvc architecture:- Angular JS follows the model-view-controller pattern, making application development organized & efficient.

2.) Two-way data binding:- Automatically synchronizes data between the model & the view, reducing the need for manual DOM manipulation.

3.) Templates:- Use HTML-based templates to define the UI, making it easy for developers.



to design views.

Q.7. How would you use the term typescript? Give the advantages and disadvantages of using it.

→ Typescript is a strongly typed programming language that builds on Javascript, adding static type.

- Advantages of Typescript:-

- 1.) Static Typing:- Helps catch errors at compile time rather than runtime.

- 2.) Improved Javascript code quality

- 3.) Backward compatibility

- 4.) Better code maintainability.

- Disadvantages of Typescript:-

- 1.) Learning Curve:- Developers need to learn additional concepts beyond Javascript.

- 2.) Configuration Required

- 3.) Third-Party Library support.

- 4.) Increased complexity.

- 5.) compilation Overhead.