

Experiment-10

Date: _____

Fetch user details from server using REST API and show in profile menu using Angular.

PROCEDURE

Step1: Now we are creating a login form or a blog which is a very important in any application.

Step2: a) Using RESTDataSource to fetch data from REST APIs, Send a Request to a Server.

b) Manage connections to database and other data sources.

Step3: Creating Subclasses, Adding data sources to server's context function.

The context() function should create a new instance of each RESTDataSource subclass for each operation.

SOURCE CODE

Open Command Prompt

1) mk dir week 10

2) > ng new fetch api
then enter type y

3) cd fetch/api

4) ng generate / post

port . service . ts

```
import { Injectable } from '@angular/core';
import { HttpClient } from '@angular/common/http';
@Injectable({
  providedIn: 'root'
})
export class portService {
  private url = "http://jsonplaceholder.typicode.com";
  constructor() {}
  getPosts() {
    return this.httpClient.get(this.url);
  }
}
```

app.module . ts

```
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';
@NgModule({
  declarations: [
    AppComponent
  ],
  imports: [
    BrowserModule,
    HttpClientModule
  ],
  providers: []
})
export class AppModule {}
```

providers: [] ,

bootstrap: [App Component]

3)

App Component.html

<h1> to fetch data from api in angular </h1>
<ul class="list-group">

ng for="let post of posts"

<div class="list-group-item">

<h3> {{post.title}} </h3>

OUTPUT

SPA APP Home profile

Welcome to SPA REST API Demo

VIVA QUESTIONS

1. Elaborate about URI?

Ans. A compact string of characters for identifying an abstract or physical resource.

2. What is the concept of statelessness in REST?

Ans. A communication method in which server computes every client request independently of all requests.

3. List out the HTTP methods.

Ans. GET, PUT, POST, DELETE

4. What is reactive programming and how does it relate to angular?

Ans. At the heart of reactive programming in Angular uses the concept of observables.

5. What are the differences between REST and AJAX?

Ans. Rest is a protocol which extends the functionality of the HTTP methods.

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Experiment-11

Date: 5/6/24

AIM

Design Single Page Application with different menu items using react.

PROCEDURE

Step-1: To create the example project for this example, open command prompt, navigate to a convenient location, and run the command as shown below

```
npx create-react-app <application-name>
```

SOURCE CODE

Commands

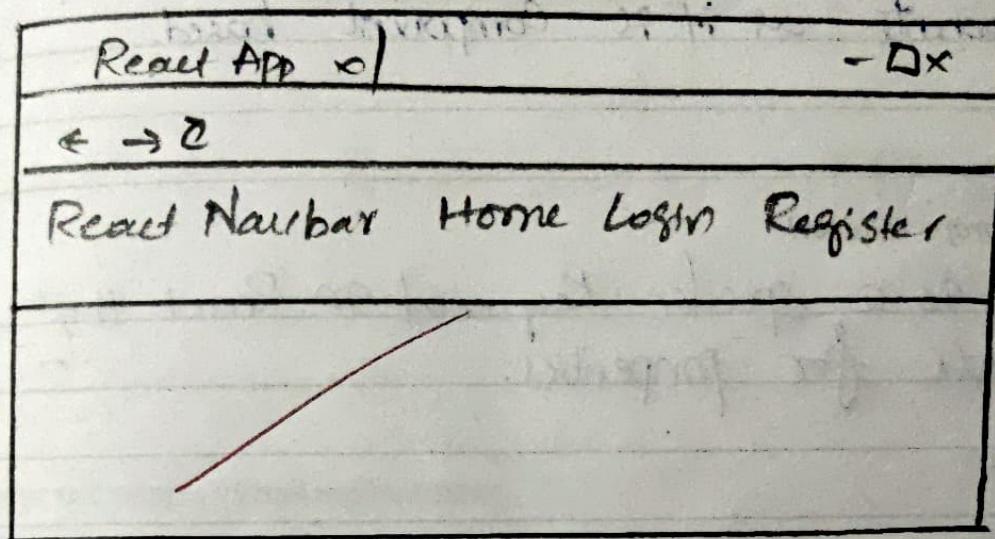
- m1 < dev user >
- cd user
- npx create -react -app myreactapp
- cd my react app
- npm start
- npm install bootstrap @ 5.13 react-bootstrap
- npm start and open Vscode.

```
import bootstrap from 'bootstrap/dist/css/bootstrap.css'
import Container from 'react-bootstrap/Container'
import Nav from 'react-bootstrap/Nav'
import Navbar from 'react-bootstrap/Navbar'

function App() {
  return (
    <Navbar bg="info" data-bs-theme="dark">
      <Container>
        <Navbar className="me-auto">
          <a href="#home">Home </a>
          <a href="#">Register </a>
        </Navbar>
      </Container>
    </Navbar>
  );
}

export default App;
```

OUTPUT



VIVA QUESTIONS

1. How does react work?

Ans. React divides the webpage into multiple Components as it is Component based.

2. What are props in react?

Ans. Props is a specific keyword in React that stands for properties.

3. Difference between VirtualDOM and RealDOM.

Ans. The Real DOM is slower than the Virtual DOM as every update requires.

4. Describe MVC in reference to angular.

Ans. Angular Is support the mvc pattern model view controller.

5. Define stateful component.

Ans. Stateful Component are the component which have a state.

X mark

SOURCE CODECommands

- 1) Install python
- 2) Open Command prompt
- 3) Run python -version to check the version of python.
- 4) Install Django package in windows using
 pip install django
- 5) Create a Virtual environment
 python -m venv week12
- 6) To activate the environment run:
 week12\scripts\activate

OUTPUT

(my world)

VIVA QUESTIONS

1. What is long polling?

Ans. Long polling is a technique to achieve
real time communication b/w client and
server.

2. Write the significance of frameworks for full stack development?

Ans. It can help to improve the efficiency of
the development process.

Komal

Step-4: \$ python manage.py runserver

Then, in your browser, go to <http://localhost:8000>.

Step-5: Add the Pages to App.

Step-6: Create a View, add a Route and add bootstrap to the application.

SOURCE CODE

Commands

- 1) Open cmd
- 2) > py -m pip install Django
- 3) > django-admin startproject DjangoManagement
- 4) cd DjangoManagement
- 5) py manage.py start myapp
- 6) go to vs code
- 7) Open setting.py & add 'myapp' inside Installed apps
- 8) Go to config & edit on second time add "include" & else add path.C."> include('myapp.py'));
- 9) Navigate to Navbar.html
- 10) go to setting.py inside template in DIR : [template]
- 11) Under myapp open views.py & add the code


```
def navbar(request):
    return render (request, 'navbar.html')
```

- 12) Reopen manage.py terminal
- 13) you will get a link copy & paste in chrome.

navbar.html

```

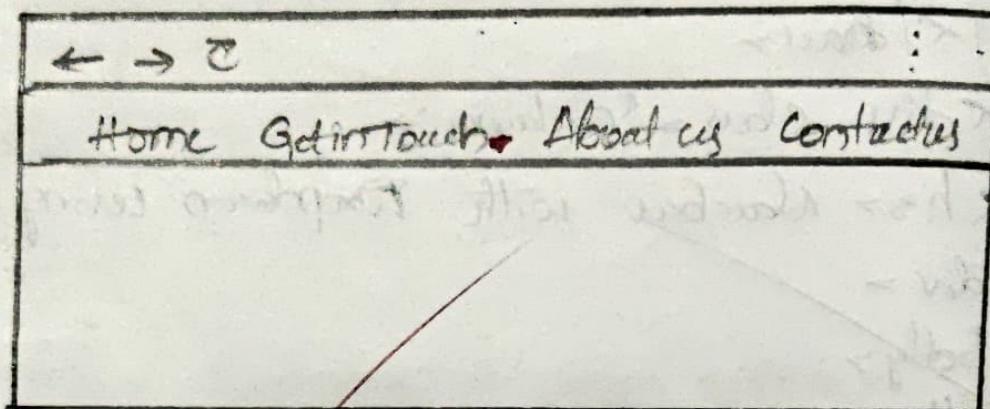
<html>
  <head>
    <title> Bootstrap example </title>
    <script src="https://ajax.googleapis.com/ajax/
      jquery/3.5.1/min.js" ></script>
  </head>
  <body>

    <div class="navbar navbar-expand-lg">
      <div class="container-fluid">
        <div class="navbar-header">
          <a class="navbar-brand" href="#">control </a>
        </div>
        <ul class="nav navbar-nav">
          <li><a href="#">subscribe us </a></li>
          <li><a href="#">Login </a></li>
        </ul>
      </div>
    </div>
  </body>
</html>

```

</url>
</div>
- </div>
<div class="container">
<h3> Navbar with dropdown using Django <h3>
~~<div>~~
~~<body>~~
~~</html>~~

OUTPUT



VIVA QUESTIONS

1. What is purpose of Django apps?

Ans. enables developer to reuse chunk of code instead of writing an entire application from scratch.

2. How does Django manage static files like CSS, JavaScript and images?

Ans. Include the `Django.conf`.

3. Difference between Django and react.

Ans. Django is a web framework for backend development.

4. How can you deploy a Django application in a production server?

Ans. Choose a hosting provider.
Set up your server.
Install dependencies.

5. What is content delivery Network (CDN)?

Ans. A Content delivery network or Content distribution.

6. List out the applications of JSON and XML in rest framework.

Ans. the same resource may return either or JSON depending upon request.

Xerox

Experiment-14

Date: _____

AIM

Fetch user details from server using REST API and show in profile menu using Django.

PROCEDURE

Step-1: After completing the previous experiment tasks Instantiate a new django project.

\$ django-admin startproject tutorial .

Step-2: Necessary to sync database before staring development. The database can be managed with the **manage.py** script that was created when you ran the **django-admin** command.

Step-3: Create users in Django

Create an initial user named **admin** with the example password of **password123**

Step-4: Implement **serializes** and **views** in Django

Step-5: Generate URLs with Django

Step-6: Test your Django API, by navigating to the URL **http://localhost:8000/users** using **curl** command.

SOURCE CODE

1) Open cmd
2) > python -m install django rest framework
3) In settings.py article Installed apps
'rest_framework':

- 4) Go to module.py type the Code
class Student model (models.model):
 name = models.CharField(max_length=50)
 dept = models.CharField(max_length=50)
 roll = models.IntegerField()
 def __str__(self) → str:
 return self.name
- 5) Open admin.py file
from models import Student model
admin.site.register(Student model)
- 6) → python manage.py migrate
- 7) → python manage.py migrate
- 8) To Run
→ python manage.py runserver.

OUTPUT

← → C

Django

username

~~password~~

VIVA QUESTIONS

1. Why should we use Django?

Ans. has a lot of security features built in

2. Explain the concept of middleware in Django.

Ans. a framework of hooks into Django request :

3. What is the significance of proxy models.

Ans. Sentivity, analysis, loggy.

4. What is the difference between Django vs react and which is the best?

Ans. Django excels in Backend Development while React .

5. What is RESTful API?

Ans. Restful is a s/w architecture style that was create to grade.