**EXPERIMENT 2:**

**Design a simple webpage using bootstrap templat**

**Create a folder Week2 Create a file bootstrap.html inside the folder and also save an image**

**inside the folder.**

**<!DOCTYPE html>**

**<html lang="en">**

**//Head Tag**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial-scale=1.0">**

**<title>Week2 Bootstrap</title>**

**//Css style**

**<style>**

**footer {**

**color: white;**

**padding: 15px;**

**bottom: 0;**

**position: absolute;**

**}**

**</style>**

**//Bootstrap CDN Links**

**<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css"**

**rel="stylesheet" integrity="sha384-**

**1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3"**

**crossorigin="anonymous">**

**<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js"**

**integrity="sha384-**

**ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p"**

**crossorigin="anonymous">**

**</script></head>**

**//body tag**

**<body>**

**//Creating NavBar**

**<nav class="navbar navbar-expand navbar-dark bg-success">**

**<div class="container-fluid">**

**//Attaching Navbar brand image**

**<a class="navbar-brand" href=""><img src="dora.jfif" alt="dora" width="40"**

**height="40"></a>**

**//Attaching navbar About us and Contact using Unorder list tags and anchor links**

**tags**

**<ul class="navbar-nav me-auto mb-2 mb-lg-0">**

**<li class="nav-item">**

**<a class="nav-link active" href="">About us</a>**

**</li>**

**<li class="nav-item">**

**<a class="nav-link" href="">Contact</a>**

**</li>**

**//Attaching navbar dropdown-toggle button same unorder list tag**

**<li class="nav-item dropdown">**

**<a class="nav-link dropdown-toggle"**

**role="button"**

**id="navbarDropdown"**

**data-bs-toggle="dropdown"**

**href="">Episodes</a>**

**//Attaching dropdown-items in dropdown menu**

**<ul class="dropdown-menu">**

**<li>**

**<a class="dropdown-item" href="">Episode1</a>**

**</li>**

**<li>**

**<a class="dropdown-item" href="">Episode2</a>**

**</li>**

**</ul>**

**</li>**

**</ul>**

**//attaching navbar search type and submit button**

**<form class="d-flex">**

**<input class="form-cotrol me-2"**

**type="search"**

**placeholder="search website"/>**

**<button class="btn btn-primary"**

**type="submit">search</button>**

**</button></form>**

**//closing div tag**

**</div>**

**//closing navbar tag**

**</nav>**

**//creating grid dividing columns col-sm-4 and col-sm-8**

**<div class="container mt-5">**

**<div class="row">**

**<div class="col-sm-4">**

**<h3>Doraemon Biography</h3>**

**</div>**

**<div class="col-sm-8">**

**<h2>Article Title</h2>**

**<h5>Created on 06 march 2024</h5>**

**<p>Doraemon is a male robotic earless cat that travels back in time from the**

**22nd century to aid a preteen boy named Nobita.**

**An official birth certificate for the character gives him a birth date of 3**

**September 2112 and lists his city of residency as Kawasaki, Kanagawa,**

**the city where the manga was created.</p>**

**</div>**

**</div>**

**</div>**

**//creating footer tag**

**<footer class="container-fluid text-center bg-success">**

**<p>copy right CMRIT\_2024<br>**

**</footer>**

**//closing body and html tags**

**</body>**

**</html>**

**Week 9**

**Design a Single Page Application with different menu items using Angular.**

**Creating Angular Project Use below Commands**

** npm install –g @angular/cli //creating cli**

** ng version**

** ng new prog9 //creating angular project SPA(Single page application) //app component is a default**

**component.**

** cd prog9**

** ng g c header //creating header component**

** ng g c home //creating home component**

** ng g c profile //creating profile component**

** ng serve //running angular project**

**Step 1:-**

**Index.html:-**

**Add bootstrap CDN links in the index.html**

**<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet"**

**integrity="sha384-QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH"**

**crossorigin="anonymous">**

**<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-**

**YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz"**

**crossorigin="anonymous"></script>Step 2:-Add RouterModule to the header.component.ts imports**

**import { RouterModule } from '@angular/router';**

**imports: [RouterModule],**

**Step 3:-Add RouterModule, HeaderComponent to the app.component.ts imports**

**import { RouterModule, RouterOutlet } from '@angular/router';**

**import { HeaderComponent } from './header/header.component';**

**imports: [RouterOutlet,RouterModule,HeaderComponent],**

**header.component.html:-**

**<nav class="navbar navbar-expand-lg bg-body-tertiary">**

**<div class="container-fluid">**

**<a class="navbar-brand" [routerLink]="['/']">SPA-Demo</a>**

**<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav" aria**

**controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">**

**<span class="navbar-toggler-icon"></span>**

**</button>**

**<div class="collapse navbar-collapse" id="navbarNav">**

**<ul class="navbar-nav">**

**<li class="nav-item">**

**<a class="nav-link active" [routerLinkActiveOptions]="{exact:true}" routerLinkActive="active"**

**aria-current="page" [routerLink]="['/']">Home</a>**

**</li>**

**<li class="nav-item">**

**<a class="nav-link" [routerLinkActiveOptions]="{exact:true}" routerLinkActive="active"**

**[routerLink]="['/profile']">Profile</a>**

**</li>**

**</ul>**

**</div>**

**</div>**

**</nav>**

**home.component.html**

**<section class="container mt-5 text-center">**

**<h1>Welcome to SPA Demo Page</h1>**

**</section>**

**profile.component.html**

**<section class="container mt-5 text-center">**

**<h1>Welcome to Profile Page</h1>**

**</section>**

**app.component.html<app-header></app-header>**

**<router-outlet></router-outlet>**

**app.routes.ts**

**import { Routes } from '@angular/router';**

**import { HomeComponent } from './home/home.component';**

**import { ProfileComponent } from './profile/profile.component';**

**export const routes: Routes = [**

**{**

**path:'',**

**component:HomeComponent,**

**title:"Home"**

**},**

**{**

**path:'profile',**

**component:ProfileComponent,**

**title:"Profile"**

**}**

**];**

**Exp-6**

**Write middleware to validate users and generate JWT**

**Softwares:-Node Js 20 version and visual studio**

**Step 1:-Create package.json file initializing project using command npm(node package**

**manager)**

** npm init (or) npm init –y**

**package.json file created show above fig.1.**

** Install express and nodemon use command**

**npm i express nodemon fs path jsonwebtoken**

**Note:**

**Step 1) Download Postman. Go to https://www.postman.com/downloads/ and**

**choose your desired platform among Mac, Windows or Linux. ...**

**Step 2) Click on Run. ...**

**Step 3) Postman Installation Start. ...**

**Step 4) Signup for Postman Account. ...**

**Step 5) Click on Save My Preferences. ...**

**Step 6) Congratulation!Code:-**

**database.json:-**

**[ {"name":"anusha","work":"Assistant Professor","password":"anu"},**

**{"name":"radha","work":"Assistant Professor","password":"radha12"},**

**{"name":"jaya","work":"Assistant Professor","password":"jaya12"}**

**]**

**login.html:-**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Login</title>**

**<style>**

**h2{**

**display:none;**

**}**

**</style>**

**<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>**

**<script>**

**const form=$("#loginForm");**

**$(document).ready(function(){**

**$("#loginForm").submit(**

**(event)=>{**

**event.preventDefault();**

**var name=$("#username").val();**

**var password=$("#pwd").val();**

**$.ajax({**

**url:"/auth",**

**type:"POST",**

**contentType:"application/json",**

**dataType:"json",**

**data:JSON.stringify({**

**name:name,**

**password:password**

**}),**

**success:function(data){**

**var tokenData=data;if(tokenData.login==true){**

**if(verifyLogin(tokenData.token)){**

**$("#verified").show();**

**$("#not-verified").hide();**

**alert("JWT Token: "+tokenData.token);**

**}**

**}**

**else{**

**$("#verified").hide();**

**$("#not-verified").show();**

**alert("Authentication Failed");**

**}**

**},**

**error:function(data){**

**console.log("Something went wrong");**

**}**

**});**

**});**

**});**

**function verifyLogin(token)**

**{**

**let result=true;**

**$.ajax({**

**url:"/verifyToken",**

**type:"POST",**

**contentType:"application/json",**

**dataType:"json",**

**data:JSON.stringify({**

**token:token,**

**}),**

**success:function(data){**

**if(data.login==true)**

**{**

**result=true;**

**}**

**else{**

**result=false;**

**}**

**},**

**error:function(data){console.log("wrong Token, Not Authenticated.");**

**}**

**});**

**return result;**

**}**

**</script>**

**</head>**

**<body>**

**<center>**

**<h1>Login Page</h1>**

**<form id="loginForm">**

**<label for="username">UserName:</label><br>**

**<input type="text" id="username" name="username"><br>**

**<label for="pwd">Password:</label><br>**

**<input type="password" id="pwd" name="pwd"><br>**

**<input type="submit" value="Submit">**

**</form>**

**<h2 id="verified">You are a verified user</h2>**

**<h2 id="not-verified">You are not a verified user</h2>**

**</center>**

**</body>**

**</html>**

**server1.js:-**

**//import express for creating APIs endpoints**

**const express=require("express");**

**const path=require("path");**

**const fs=require("fs");**

**const users=require("./database.json");**

**var database;**

**var token="wrong key";**

**//Read database.json file**

**fs.readFile("database.json",function(err,data){**

**//check for errors**

**if(err) throw err;**

**//Converting to JSON**

**database=JSON.parse(data);**

**});const jwt=require("jsonwebtoken");**

**const app=express();**

**const port=3001;**

**app.use(express.json());**

**app.get('/',(req, res)=>{**

**res.sendFile(\_\_dirname+'/login.html');**

**});**

**app.post("/auth",(req,res)=>{**

**const name=req.body.name;**

**console.log(name);**

**const password=req.body.password;**

**console.log(password);**

**let isPresent=false;**

**let isPresentIndex=null;**

**for(let i=0;i<database.length;i++){**

**if(database[i].name===name && database[i].password===password){**

**isPresent=true;**

**isPresentIndex=i;**

**break;**

**}**

**}**

**if(isPresent){**

**const token=jwt.sign(database[isPresentIndex],"secret");**

**res.json({**

**login:true,**

**token:token,**

**data:database[isPresentIndex],**

**});**

**}**

**else{**

**res.json({**

**login:false,**

**token:token,**

**error:"please check name and password"**

**});**

**}**

**});**

**app.post("/verifyToken", (req, res)=>{**

**const token=req.body.token;**

**if(token){**

**const decode=jwt.verify(token,"secret");res.json({**

**login:true,**

**data:decode**

**});**

**}**

**else{**

**res.json({**

**login:false,**

**data:"error"**

**});**

**}**

**});**

**app.post('/login',(req, res)=>{**

**res.redirect("/login");**

**});**

**app.listen(port, ()=>{**

**console.log(`Server is running:http://localhost:${port}/`);**

**});**

**Output:**

**Output:-**

**Run code use command**

 **node server.js**

**EXPERIMENT 3:**

**Write a java script code to validate user registration and login form.**

**Create folder week3 inside create two html files.**

**1 file registration.html**

**2 file success.html**

**3 file login.html**

**4 file success2.html**

**Add two images same folder.**

**Code:-Registration.html**

**<!DOCTYPE html>**

**<html lang="en">**

**<head><meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width,**

**initial-scale=1.0">**

**<title>Registration Page</title>**

**//css Design part**

**<style>**

**fieldset{**

**width:500px;**

**background-image:url(n1.jpg);**

**background-repeat:no-repeat;**

**background-size:cover;**

**}**

**table tr td{**

**padding-top:6px;**

**padding-bottom:6px;**

**}**

**body{**

**color:white;**

**}**

**</style>**

**//validation using java script code**

**<script>**

**function validate(){**

**let fn=frm.fname.value;**

**for(let x in fn){**

**let ch=fn.charCodeAt(x);**

**if(ch<65||ch>90 && ch<97||ch>122)**

**{**

**alert("Invalid firstname");**

**return false;**

**}**

**}**

**let fn1=frm.lname.value;for(let x in fn1){**

**let ch=fn1.charCodeAt(x);**

**if(ch<65||ch>90 && ch<97||ch>122)**

**{**

**alert("Invalid Lastname");**

**return false;**

**}**

**}**

**let phn=frm.phone.value;**

**let len=phn.length;**

**if(len!==10)**

**{**

**alert("phone no. should be exactly 10 digits");**

**return false;**

**}**

**let reg="@";**

**let mail=frm.email.value;**

**if(reg.test(mail))**

**{**

**alert("Invalid mail");**

**return false;**

**}**

**let p1=frm.pwd.value;**

**let p2=p1.length;**

**if(p2>8)**

**{**

**alert("Password should not exceed 8 digits");**

**return false;**

**}**

**return true;**

**}**

**</script>**

**</head>//creating registration form**

**<body style="background-image:url(nature.jpg);background**

**repeat:no-repeat;background-size:cover">**

**<center>**

**<h2>Registration</h2>**

**<form name="frm" method="post" action="success.html"**

**onSubmit="return validate()">**

**<fieldset>**

**<table>**

**<tr><td>First Name:</td><td><input type="text"**

**name="fname" value="" required/> </td></tr>**

**<tr><td>Last Name:</td><td><input type="text"**

**name="lname" value="" required/> </td></tr>**

**<!--<label for="num">Phone No.:</label>**

**<input type="tel" name="Mobile" id="num" maxlength="10"**

**placeholder="Enter user Mobile No." required />-->**

**<tr><td>Phone no.:</td><td><input type="number"**

**name="phone" value="" required/> </td></tr>**

**<tr><td>Mail Id:</td><td><input type="email"**

**name="mailid" value="" required/> </td></tr>**

**<tr><td>Gender:</td>**

**<td>Male:<input type="radio" name="gender"**

**value="male"/> </td>**

**<td>Female:<input type="radio" name="gender"**

**value="female"/> </td>**

**</tr>**

**<tr><td>DOB:</td><td><input type="date" name="dob"**

**required/> </td></tr>**

**<tr><td>User Name:</td><td><input type="text"**

**name="uname" value="" required/> </td></tr>**

**<tr><td>Password:</td><td><input type="password"**

**name="pwd" value="" required/> </td></tr>**

**<tr><td>Age:</td><td><input type="number" name="age"**

**value="" required/> </td></tr>**

**</table><input type="submit" value="Registration"**

**name="submit"/>**

**//login button if existing user**

**<a href="login.html"><input type="button" value="login"**

**name="submit"/></a>**

**</fieldset>**

**<p>Copyright CMRIT\_2024</p>**

**</form>**

**</center>**

**</body>**

**</html>**

**Code:-Success.html**

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width,**

**initial-scale=1.0">**

**<title>Document</title>**

**</head>**

**<body>**

**<h2>Registration Successfull</h2>**

**</body>**

**</html>**

**Code:-login.html**

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial**

**scale=1.0">**

**<title>Document</title>**

**//css Design part**

**<style>**

**fieldset{width:500px;**

**background-image:url(nature.jpg);**

**background-repeat:no-repeat;**

**background-size:cover;**

**}**

**table tr td{**

**padding-top:6px;**

**padding-bottom:6px;**

**}**

**</style>**

**//validation using java script code**

**<script>**

**function validate(){**

**let p1=frm.pwd.value;**

**let p2=p1.length;**

**if(p2>8)**

**{**

**alert("Password should not exceed 8 digits");**

**return false;**

**}**

**return true;**

**}**

**</script>**

**</head>**

**//creating login form**

**<body style="background-image:url(n1.jpg);background-repeat:no**

**repeat;background-size:cover">**

**<center>**

**<h2>Login</h2>**

**<form name="frm" method="post" action="abc.html" onSubmit="return**

**validate()">**

**<fieldset>**

**<table>**

**<tr><td>User Name:</td><td><input type="text" name="uname"**

**value="" required/> </td></tr>**

**<tr><td>Password:</td><td><input type="password" name="pwd"**

**value="" required/> </td></tr></table>**

**<input type="submit" value="Login" name="submit"/>**

**//registration button if new user**

**<a href="Registration.html"><input type="button" value="Registration"**

**name="submit"/></a>**

**</fieldset>**

**<p>Copyright CMRIT\_2024</p>**

**</form>**

**</center>**

**</body>**

**</html>**

**Code:-Success2.html**

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial**

**scale=1.0">**

**<title>Document</title>**

**</head>**

**<body>**

**<h2>Login Successfull</h2>**

**</body>**

**</html>**