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2004-2024 (20th Anniversary)

Sprint-2 Plan

Employee Detail Management

1. Establishing Project Folder Architecture
2. Server App Initialization
3. **Sprint-2 Execution** [2(a), 2(b), 2(c), **2(d)**(i)(ii)(iii)**(iv)**(v), 2(e), 2(f)]
4. Completing Sprint-1 Objectives

2(a) Employee Module - Analysis, Design & DB-Preparation

2(b) Employee View

2(c) Employee Search

2(d) Employee Insert

2(e) Employee Update

2(f) Employee Delete

2(d) Employee Insert

1. Folder and Project preparation with Backups
2. Prepare Supportive Data for the Insert Form
3. Prepare Regex(Regular Expression) Service for the Insert Form
4. **Client App**
 1. **Define Form Controls with Required Validator**
 2. **Define HTML Form Controls with relevant Binding**
 3. Test for Error Messages
 4. Test for Confirmation Message
 5. Service Implementation with POST Request
5. Server-App

1. **Define Form Controls with Validators**

2. **Define HTML Form Controls with relevant Binding**

We have 3 Forms in our UI

- (1) Client Search
- (2) Server Search
- (3) **Form for Add New**

This form represent the relevant Object of the Module

Form Field of the Form will be bind with the relevant attributes of the Object

Validation Criteria will be defined with each form field for automatic validation by the Angular Framework

1. Define the FormGroup (The Form/Entity)

```
employee.component.ts
26
27 export class EmployeeComponent {
28
29     columns: string[] = ['number', 'callingname', 'gender', 'designation', 'fullname', 'modi'];
30     headers: string[] = ['Number', 'Calling Name', 'Gender', 'Designation', 'Full Name', 'Modification'];
31     binders: string[] = ['number', 'callingname', 'gender.name', 'designation.name', 'fullname', 'getModi()'];
32
33     cscolumns: string[] = ['csnumber', 'cscallingname', 'csgender', 'csdesignation', 'csname', 'csmodi'];
34     csprompts: string[] = ['Search by Number', 'Search by Name', 'Search by Gender',
35         'Search by Designation', 'Search by Full Name', 'Search by Modi'];
36
37     public csearch!: FormGroup;
38     public ssearch!: FormGroup;
39     public employee!: FormGroup;
40
41     employees: Array<Employee> = [];
42     data!: MatTableDataSource<Employee>;
43     imageUrl: string = '';
44     @ViewChild(MatPaginator) paginator!: MatPaginator;
45
46     genders: Array<Gender> = [];
47     designations: Array<Designation> = [];
48     employeestatuses: Array<Employeestatus> = [];
49
50     regexes: any;
51
52     uiassist: UiAssist;
53
54     constructor(
55         private es: EmployeeService,
56         private gs: GenderService,
```

Employee Form

Number	<input type="text"/>
Full Name	<input type="text"/>
Calling Name	<input type="text"/>
photo	<input type="text"/>
Gender	<input type="text"/>
Birth Date	<input type="text"/>
Nic	<input type="text"/>
Address	<input type="text"/>
Mobile	<input type="text"/>
Land	<input type="text"/>
Designation	<input type="text"/>
Status	<input type="text"/>
Description	<input type="text"/>

Delete Update Clear Add

employee

id INT
number CHAR(4)
fullname VARCHAR(150)
callingname VARCHAR(45)
photo BLOB
gender_id INT
dobirth DATE
nic CHAR(12)
address TEXT
mobile CHAR(10)
land CHAR(10)
doassignment DATE
designation_id INT
employeestatus_id INT
description TEXT

Indexes

```
employee.ts
1 import {Gender} from "../gender";
2 import {Designation} from "../designation";
3 import {Employeestatus} from "../employeestatus";
4
5 export class Employee{
6
7     public id!: number;
8     public fullname!: string;
9     public number!: string;
10    public callingname!: string;
11    public photo!: string;
12    public dob!: string;
13    public nic!: string;
14    public address!: string;
15    public mobile!: string;
16    public land!: string;
17    public doassignment!: string;
18    public description!: string;
19    public gender!: Gender;
20    public designation!: Designation;
21    public employeestatus!: Employeestatus;
22
```

2. Define the FormControls (Input Fields / Attributes)

```
employee.component.ts x
53
54     constructor(
55         private es: EmployeeService,
56         private gs: GenderService,
57         private ds: DesignationService,
58         private ss: EmployeestatusService,
59         private rs: RegexService,
60         private fb: FormBuilder,
61         private dg: MatDialog ) {
62
63         this.uiassist = new UiAssist(this);
64
65         this.csearch = this.fb.group( controls: {
66             "csnumber": new FormControl(),
67             "cscallingname": new FormControl(),
68             "csgender": new FormControl(),
69             "csdesignation": new FormControl(),
70             "csname": new FormControl(),
71             "csmodi": new FormControl(),
72         });
73
74         this.ssearch = this.fb.group( controls: {
75             "ssnumber": new FormControl(),
76             "ssfullname": new FormControl(),
77             "ssgender": new FormControl(),
78             "ssdesignation": new FormControl(),
79             "ssnic": new FormControl()
80         });
81
82         this.employee = this.fb.group( controls: {
83             "number": new FormControl( value: '', validatorOrOpts: [Validators.required] ),
84             "fullName": new FormControl( value: '', validatorOrOpts: [ Validators.required] ),
85             "callingName": new FormControl( value: '', validatorOrOpts: [ Validators.required]),
86             "gender": new FormControl( value: '', validatorOrOpts: [ Validators.required]),
87             "nic": new FormControl( value: '', validatorOrOpts: [ Validators.required]),
88             "brithdate": new FormControl( value: '', validatorOrOpts: [Validators.required]),
89             "photo": new FormControl( value: '', validatorOrOpts: [Validators.required]),
90             "address": new FormControl( value: '', validatorOrOpts: [Validators.required]),
91             "mobile": new FormControl( value: '', validatorOrOpts: [Validators.required]),
92             "land": new FormControl( value: '', validatorOrOpts: [Validators.required]),
93             "designation": new FormControl( value: '', validatorOrOpts: [Validators.required]),
94             "assignmentDate": new FormControl( value: '', validatorOrOpts: [Validators.required]),
95             "description": new FormControl( value: '', validatorOrOpts: [Validators.required]),
96             "employeestatus": new FormControl( value: '', validatorOrOpts: [Validators.required]),
97         });
98
99     }
```

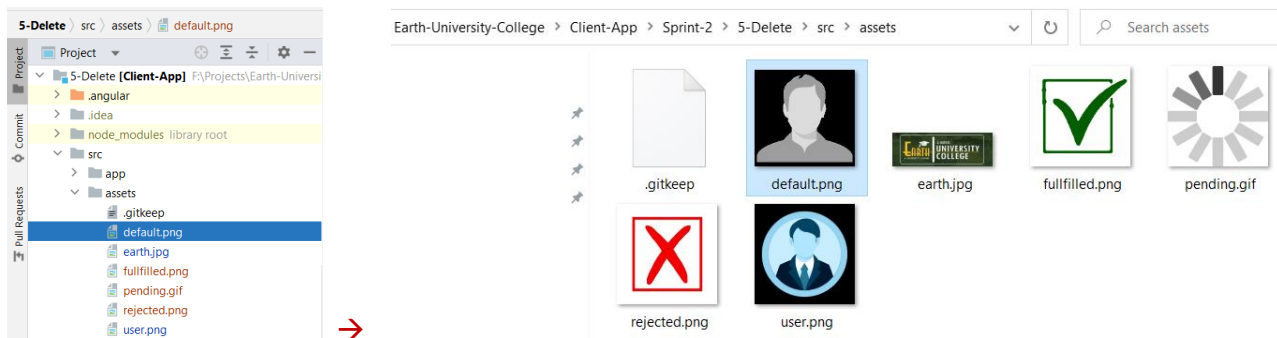
3. Define the HTML Form Template

1. Need to import "MatDatepicker" in "app.module.ts" → Date of Birth Input Control
2. Check the availability of "default.png" in the "assets" folder, otherwise add
3. Need to define default employee url in the Controller
4. Need to define Image Handling Supportive Functions in the Controller
5. Need to define HTML Form Template
6. Add required CSS to get desired appearance and layout

1. Need to import "MatDatepicker" & "MatNativeDate" in "app.module.ts" → Date of Birth Input Control

```
app.module.ts
32 import {MatDatepickerModule} from "@angular/material/datepicker";
33 import {MatNativeDateModule} from "@angular/material/core";
34
35
36 @NgModule({
37   declarations: [
38     AppComponent,
39     HomeComponent,
40     LoginComponent,
41     MainwindowComponent,
42     EmployeeComponent,
43     UserComponent,
44     CourseComponent,
45     MessageComponent,
46     ConfirmComponent
47   ],
48   imports: [
49     MatDatepickerModule,
50     MatNativeDateModule,
51     MatSelectModule,
52     MatTableModule,
```

2. Check the availability of "default.png" in the "assets" folder, otherwise add



3. Need to define default image url in the Controller (imageempurl: string='assets/default.png')

```
employee.component.ts
37 public csearch!: FormGroup;
38 public ssearch!: FormGroup;
39 public employee!: FormGroup;
40
41 employees: Array<Employee> = [];
42 data!: MatTableDataSource<Employee>;
43 imageurl: string = '';
44 @ViewChild(MatPaginator) paginator!: MatPaginator;
45 imageempurl: string = 'assets/default.png';
46
47 genders: Array<Gender> = [];
48 designations: Array<Designation> = [];
49 employeeestatuses: Array<Employeeestatus> = [];
50
51 regexes: any;
52
53 uiassist: UiAssist;
54
55 constructor(
```

4. Need to define Image Handling Supportive Functions in the Controller (`selectImage()`, `clearImage()`)

```
employee.component.ts
230
231 selectImage(e:any):void{
232     if(e.target.files){
233         let reader = new FileReader();
234         reader.readAsDataURL(e.target.files[0]);
235         reader.onload=( event:any)=>{ this.imageempurl = event.target.result; }
236     }
237 }
238
239 clearImage():void{
240     this.imageempurl = 'assets/default.png';
241 }
242
```

5. Need to define HTML Form Template

```
employee.component.html
1 <mat-grid-list [cols]="12" rowHeight="4rem">
2
3 <mat-grid-tile [colspan]="4" [rowspan]="10">
4     <mat-card>
5         <mat-card-header>
6             <mat-card-title>Employee Detail</mat-card-title>
7         </mat-card-header>
8         <mat-card-content></mat-card-content>
9     </mat-card>
10 </mat-grid-tile>
```

```
<mat-card-content id="employeeform">
```

```
<mat-form [formGroup]="employee" >

    <mat-form-field appearance="outline">
        <mat-label>Number</mat-label>
        <input matInput formControlName="number">
    </mat-form-field>

    <mat-form-field appearance="outline">
        <mat-label>Full Name</mat-label>
        <input matInput formControlName="fullName">
    </mat-form-field>

    <mat-form-field appearance="outline">
        <mat-label>Calling Name</mat-label>
        <input matInput formControlName="callingName">
    </mat-form-field>

    <mat-form-field appearance="outline">
        <mat-label>Gender</mat-label>
        <mat-select formControlName="gender">
            <mat-option [value]="null" selected>Not Selected</mat-option>
            <mat-option *ngFor="let gender of genders" [value]="gender.id">{{gender.name}}</mat-
option>
        </mat-select>
    </mat-form-field>

    <mat-form-field appearance="outline">
        <mat-label>NIC</mat-label>
        <input matInput formControlName="nic">
    </mat-form-field>
```

```

<mat-form-field appearance="outline">
  <mat-label>Birth Date</mat-label>
  <input matInput [matDatepicker]="dob" formControlName="brithdate">
  <mat-datepicker-toggle matIconSuffix [for]="dob"></mat-datepicker-toggle>
  <mat-datepicker #dob></mat-datepicker>
</mat-form-field>

<div id="imgpanel">
  <img [src]="imageempurl">
  <input id="userImage" hidden="hidden" (change)="selectImage($event)" Select type="file">
  <label for="userImage" id="selectbutton">Select</label>
  <label id="clearbutton" (click)="clearImage()">Clear</label>
</div>

<mat-form-field appearance="outline">
  <mat-label>Address</mat-label>
  <input matInput formControlName="address">
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Mobile</mat-label>
  <input matInput formControlName="mobile">
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Land</mat-label>
  <input matInput formControlName="land">
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Designation</mat-label>
  <mat-select formControlName="designation">
    <mat-option [value]="null" selected>Not Selected</mat-option>
    <mat-option *ngFor="let designation of designations"
[value]="designation.id">{{designation.name}}</mat-option>
  </mat-select>
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Assignment Date</mat-label>
  <input matInput [matDatepicker]="assdate" formControlName="assignmentDate">
  <mat-datepicker-toggle matIconSuffix [for]="assdate"></mat-datepicker-toggle>
  <mat-datepicker #assdate></mat-datepicker>
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Description</mat-label>
  <input matInput formControlName="description">
</mat-form-field>

<mat-form-field appearance="outline">
  <mat-label>Employee Status</mat-label>
  <mat-select formControlName="employeeestatus">
    <mat-option [value]="null" selected>Not Selected</mat-option>
    <mat-option *ngFor="let employeeestatus of employeeestatuses"
[value]="employeeestatus.id">{{employeeestatus.name}}</mat-option>
  </mat-select>
</mat-form-field>

<div id="butpanel">
  <button mat-raised-button>Add</button>
  <button mat-raised-button>Clear</button>
  <button mat-raised-button>Update</button>
  <button mat-raised-button>Delete</button>
</div>

</mat-form>
</mat-card-content>

```

6. Add required CSS to get desired appearance and layout

```
/* Employee Form */
#employeeform {
    padding-top: 20px;
}

/* Employee Form > Photo Panel */
#imgpanel {
    height: 100px;
    margin-bottom: 30px;
}

#imgpanel img{
    height: 100px;
    width: 100px;
}

#selectbutton, #clearbutton{
    width: 150px;
    display: block;
    margin-left: 150px;
    margin-bottom: 5px;
    background-color: darkolivegreen;
    color: white;
    padding: 8px;
    border-radius: 5px;
    text-align: center;
}

#selectbutton{
    margin-top: -100px;
}

/* Employee Form > Button Panel */
#butpanel{ margin-top: 30px;
    margin-bottom: 30px;
}

#butpanel button{
    width: 82px;
    margin: 3px;
    background-color: #435f3b;
    color: white;
}
```

7. Testing

- (a) Initial Appearance
- (b) Required Validation with each field
- (c) Photo Selection and Clear

Calling Name*

Gender*

Not Selected

Male

Female

Other

→

Gender*

Male

NIC*

Gender*

Not Selected

→

NIC*

Testing for Photo Select and Clear

Click on Select → Select a Photo

← → ↻ localhost:4200/main/employee

☰

ASHAN UNIVERSITY COLLEGE

Ashan Pathum

Home

Dashboard

Admin

Academic

Registration

Class

Reports

Employee Detail

Employee Search

Number*

Full Name*

Calling Name*

Gender*

NIC*

Birth Date*

Select

Clear

Address*

Mobile*

Open

> This PC > Earth (D:) > testphoto

ashan.png

dileesha.png

File name: ashan.png

All Files (*.*)

Open

Cancel

Modification

Search by ...

2201(Ashan)

2202(Rukmal)

2203(Imran)

3 of 6

Employee Detail

Number*


Full Name*

Calling Name*

Gender*

NIC*

Birth Date*



Select

Clear

Address*

Mobile*

Employee Search

Search by Number
 Search by Fullname
 Search by NIC

Gender
 Designation

Search

Clear Search

Employee Table

Number	Calling Name	Gender	Designation	Full Name	Modification
<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...
2201	Ashan	Male	Demonstrator L1	Ashan Pathum	2201(Ashan)
2202	Rukmal	Male	Demonstrator L1	Dileesha Rukmal	2202(Rukmal)
2203	Imran	Male	Demonstrator L1	Thahir Imran	2203(Imran)

Items per page: 3
 1 - 3 of 6

Select Another

Employee Detail

Number*


Full Name*

Calling Name*

Gender*

NIC*

Birth Date*



Select

Clear

Address*

Mobile*

Employee Search

Search by Number
 Search by Fullname
 Search by NIC

Gender
 Designation

Search

Clear Search

Employee Table

Number	Calling Name	Gender	Designation	Full Name	Modification
<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...
2201	Ashan	Male	Demonstrator L1	Ashan Pathum	2201(Ashan)
2202	Rukmal	Male	Demonstrator L1	Dileesha Rukmal	2202(Rukmal)
2203	Imran	Male	Demonstrator L1	Thahir Imran	2203(Imran)

Items per page: 3
 1 - 3 of 6

Clear Image → Observe

Employee Detail

Number*


Full Name*

Calling Name*

Gender*

NIC*

Birth Date*



Select

Clear

Employee Search

Search by Number
 Search by Fullname
 Search by NIC

Gender
 Designation

Search

Clear Search

Employee Table

Number	Calling Name	Gender	Designation	Full Name	Modification
<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...	<input type="text"/> Search by ...
2201	Ashan	Male	Demonstrator L1	Ashan Pathum	2201(Ashan)
2202	Rukmal	Male	Demonstrator L1	Dileesha Rukmal	2202(Rukmal)