**Form Builder in Reactive Form**

* FormBuilder is a service provided by Angular to configure forms and its elements dynamically.
* FormBuilder uses singleton pattern.
* FormBuilder provides methods
  + group()
  + control()
  + array()
* group() configures a form group with a set of elements initialized. <form>
* control() configures a form control <input> <select> etc.
* array() configures a collection of form controls. You can add or remove controls dynamically.
* Form builder uses the following properties to bind with element is UI.
  + formGroup : Parent Form
  + formGroupName : Child Form
  + formControlName : Form Elements
* **FormBuilder** is a member of “@angular/forms”

Ex:

**Builderdemo.component.ts**

import { Component, OnInit } from '@angular/core';

import { FormBuilder } from '@angular/forms';

@Component({

selector: 'app-builderdemo',

templateUrl: './builderdemo.component.html',

styleUrls: ['./builderdemo.component.css']

})

export class BuilderdemoComponent implements OnInit {

constructor(private fb: FormBuilder) { }

public frmRegister = this.fb.group({

Name: [''],

Price: [''],

frmDetails: this.fb.group({

City: [''],

InStock: ['']

})

});

ngOnInit(): void {

}

}

**Builderdemo.component.html**

<div class="container-fluid">

<div class="row">

<div class="col-3">

<h3>Register Product</h3>

<form [formGroup]="frmRegister">

<fieldset>

<legend>Basic Info</legend>

<dl>

<dt>Name</dt>

<dd>

<input formControlName="Name" type="text" class="form-control">

</dd>

<dt>Price</dt>

<dd>

<input formControlName="Price" type="text" class="form-control" >

</dd>

</dl>

</fieldset>

<fieldset>

<legend>Stock Details</legend>

<div formGroupName="frmDetails">

<dl>

<dt>City</dt>

<dd>

<select formControlName="City" class="form-control">

<option>Delhi</option>

<option>Hyd</option>

</select>

</dd>

<dt>InStock</dt>

<dd>

<input formControlName="InStock" type="checkbox">

</dd>

</dl>

</div>

</fieldset>

</form>

</div>

<div class="col-9">

<h3>Details</h3>

<dl>

<dt>Name</dt>

<dd>{{frmRegister.value.Name}}</dd>

<dt>Price</dt>

<dd>{{frmRegister.value.Price}}</dd>

<dt>City</dt>

<dd>{{frmRegister.value.frmDetails.City}}</dd>

<dt>Stock</dt>

<dd>

{{(frmRegister.value.frmDetails.InStock==true)?"Available":"Out of Stock"}}

</dd>

</dl>

</div>

</div>

</div>

**Form Array & Form Control**

* Form Array allows to “add or remove” any form element dynamically.
* It is configured by using “array()” method of “FormBuilder” service.
* Form Array represents TypeScript array and can make use of all array functions:
  + push()
  + pop()
  + removeAt()
  + shift() etc.

Ex:

**Builderdemo.component.ts**

import { Component, OnInit } from '@angular/core';

import { FormArray, FormBuilder } from '@angular/forms';

@Component({

selector: 'app-builderdemo',

templateUrl: './builderdemo.component.html',

styleUrls: ['./builderdemo.component.css']

})

export class BuilderdemoComponent implements OnInit {

constructor(private fb: FormBuilder) { }

public frmRegister = this.fb.group({

Name: [''],

Price: [''],

frmDetails: this.fb.group({

City: [''],

InStock: ['']

}),

***newControls: this.fb.array([this.fb.control('')])***

});

*get newControls(){*

*return this.frmRegister.get('newControls') as FormArray;*

*}*

public AddPhoto() {

this.newControls.push(this.fb.control(''));

}

public RemovePhoto(i){

this.newControls.removeAt(i);

}

ngOnInit(): void {

}

}

**Builderdemo.component.html**

<div class="container-fluid">

<div class="row">

<div class="col-3">

<h3>Register Product</h3>

<form [formGroup]="frmRegister">

<fieldset>

<legend>Basic Info</legend>

<dl>

<dt>Name</dt>

<dd>

<input formControlName="Name" type="text" class="form-control">

</dd>

<dt>Price</dt>

<dd>

<input formControlName="Price" type="text" class="form-control" >

</dd>

</dl>

</fieldset>

<fieldset>

<legend>Stock Details</legend>

<div formGroupName="frmDetails">

<dl>

<dt>City</dt>

<dd>

<select formControlName="City" class="form-control">

<option>Delhi</option>

<option>Hyd</option>

</select>

</dd>

<dt>InStock</dt>

<dd>

<input formControlName="InStock" type="checkbox">

</dd>

</dl>

</div>

<div>

<h2>Upload Photo <button (click)="AddPhoto()" class="btn btn-link">Add More</button> </h2>

<div \*ngFor="let control of newControls.controls; let i=index" style="margin-top: 20px;" >

<input type="file" formControlName="i" >

<button (click)="RemovePhoto(i)" class="btn btn-link">Remove</button>

</div>

</div>

</fieldset>

</form>

</div>

<div class="col-9">

<h3>Details</h3>

<dl>

<dt>Name</dt>

<dd>{{frmRegister.value.Name}}</dd>

<dt>Price</dt>

<dd>{{frmRegister.value.Price}}</dd>

<dt>City</dt>

<dd>{{frmRegister.value.frmDetails.City}}</dd>

<dt>Stock</dt>

<dd>

{{(frmRegister.value.frmDetails.InStock==true)?"Available":"Out of Stock"}}

</dd>

</dl>

</div>

</div>

</div>