MEAN Stack [End to End Application]

Database

- Install MongoDB
- Open "MongoDB Compass"
- Create
  Database: onlineshopping
  Collection: tblproducts
- Insert Documents into "tblproducts"
  ```
  {
    "ProductId":1,
    "Name": "Samsung TV",
    "Price": 46000.55,
    "Stock": true
  }
  ```

Server Side

- Create a new folder "Server" in your angular "**projects**" folder
- Install following Libraries

> **npm install mongodb --save**

> **npm install express --save**

> **npm install cors --save**

- Add a new file **"WebApi.js"**

```
var mongoClient =
require("mongodb").MongoClient;

var express = require("express");

var cors = require("cors");


var url = "mongodb://127.0.0.1:27017";


var app = express();
app.use(express.urlencoded({
    extended: true
}));
app.use(express.json());
app.use(cors());
```

```javascript
app.get("/getproducts", function(req, res){
    mongoClient.connect(url, function(err,
clientObject){
        if(!err){
            var dbo =
clientObject.db("onlineshopping");
dbo.collection("tblproducts").find().toArray(fu
nction(err, documents){
            if(!err){
                res.send(documents);
            }
        })
    }
  })
})
app.post("/addproduct", function(req, res){
    mongoClient.connect(url, function(err,
clientObject){
```

```javascript
    if(!err){
        var dbo =
clientObject.db("onlineshopping");
        var data = {
            ProductId:
parseInt(req.body.ProductId),
            Name: req.body.Name,
            Price: parseFloat(req.body.Price),
            Stock: req.body.Stock
        }
dbo.collection("tblproducts").insertOne(data,
function(err, result){
            if(!err) {
                console.log("Record Inserted");
            }
        })
    }
  })
```

```
})
app.listen(8080);

console.log("Server Started :
http://127.0.0.1:8080");
```

- **Create "Contracts" folder in your "app" folder**
- **Add a new file "IProducts.ts" export interface IProduct**

```
export interface IProduct

{

    ProductId:number;

    Name:string;

    Price:number;

    Stock:boolean;

}
```

- **Import "HttpClientModule" into "app.module.ts"**
- Add a new Service into "services" folder

"ProductsApi.service.ts"

```typescript
import { Injectable } from
"@angular/core";
import { HttpClient } from
"@angular/common/http";
import { Observable } from "rxjs";
import { IProduct } from
"../contracts/IProducts";

@Injectable({
    providedIn: 'root'
})

export class ProductsAPIService
{
    constructor(private http : HttpClient){
    }
    productsGetUrl =
"http://127.0.0.1:8080/getproducts";
    productsPostUrl =
"http://127.0.0.1:8080/addproduct";
```

```typescript
    GetProducts():Observable<IProduct[]>{
        return
this.http.get<IProduct[]>(this.productsGet
Url);
    }

    AddProduct(data:any){
        return
this.http.post<any>(this.productsPostUrl,
data);
    }
}
```

- **Add a new component into "components" folder**

> ng g c consumedata –skip-tests

Consumedata.component.ts

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

```typescript
import { IProduct } from
'../../contracts/IProducts';
import { ProductsAPIService } from
'../../services/productsapi.service';

@Component({
  selector: 'app-consumedata',
  templateUrl:
'./consumedata.component.html',
  styleUrls:
['./consumedata.component.css']
})
export class ConsumedataComponent
implements OnInit {

  constructor(private data:
ProductsAPIService) { }
  products:IProduct[] = [];
  ngOnInit(): void {
this.data.GetProducts().subscribe(product
=> this.products = product)
  }
```

```
  onSubmitClick(data:any){
    this.data.AddProduct(data).subscribe();
    alert("Record Inserted");
    location.reload();
  }
}
```

Consumedata.component.html

```html
<div class="container-fluid">
  <div class="row mt-4">
    <div class="col-3">
      <h2>Add Product</h2>
      <form #frmRegister="ngForm" method="POST" (submit)="onSubmitClick(frmRegister.value)">
        <div class="mt-2">
          <label>Product Id</label>
          <div>
            <input type="text" name="ProductId" ngModel #ProductId="ngModel" class="form-control">
```

```html
        </div>
      </div>
      <div class="mt-2">
        <label>Name</label>
        <div>
          <input type="text" name="Name" ngModel #Name="ngModel" class="form-control">
        </div>
      </div>
      <div class="mt-2">
        <label>Price</label>
        <div>
          <input type="text" name="Price" ngModel #Price="ngModel" class="form-control">
        </div>
      </div>
      <div class="mt-2">
        <label>Stock</label>
        <div class="form-check form-switch">
```

```html
        <input type="checkbox"
name="Stock" ngModel
#Stock="ngModel" class="form-check-
input"> Yes
        </div>
      </div>
      <div class="mt-2 d-grid">
        <button class="btn btn-
primary">Add Product</button>
      </div>
    </form>
  </div>
  <div class="col-9">
    <h2>Products List</h2>
  <table class="table table-hover">
  <thead>
    <tr>
      <th>Product Id</th>
      <th>Name</th>
      <th>Price</th>
      <th>Stock</th>
    </tr>
```

```html
    </thead>
    <tbody>
      <tr *ngFor="let item of products">
        <td>{{item.ProductId}}</td>
        <td>{{item.Name}}</td>
        <td>{{item.Price}}</td>
<th>{{(item.Stock==true)?"Available":"Out of Stock"}}</th>
      </tr>
    </tbody>
   </table>
    </div>
   </div>
</div>
```