**Restproduct.java**

package com.tom;

import java.util.List;

import org.springframework.web.bind.annotation.DeleteMapping;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.PostMapping;

import org.springframework.web.bind.annotation.PutMapping;

import org.springframework.web.bind.annotation.RequestBody;

import org.springframework.web.bind.annotation.RestController;

@RestController

public class Restproduct {

ECommerceService ecommerceser=new ECommerceService();

//Get call using spring based web service

@GetMapping("/myurl")

public String sayHello() {

return "hi Welcome to E-Commerce";

}

//Retrieve person info using @get method

@GetMapping("/productinfo")

public Product getDummyProduct() {

Product p=new Product();// person class object created

p.setProduct\_id(1);

p.setProduct\_name("Mobile");

p.setProduct\_Model\_Number("Redmi 9");

p.setSpecifications("4 GB Ram,64 GB Internal");

return p;

}

//Retrieve the person information by id

@GetMapping("/productinforid/{id}")

public Product getDummyProductById(@PathVariable("id") Integer id) {

Product p=new Product();

p.setProduct\_id(2);

p.setProduct\_name("TV");

p.setProduct\_Model\_Number("Sony 15 A");

p.setSpecifications("Full Hd Display");

return p;

}

// add the person information POst

@PostMapping(value = "/insertproductdetails")

public Product insertDummyProduct(@RequestBody Product product) {

return ecommerceser.addProduct(product); //calling the service

}

//update person info

@PutMapping("/update")

public Product updateProductInfo(@RequestBody Product product) {

return ecommerceser.updateProduct(product);

}

//get list

@GetMapping("/getlistofproduct")

public List<Product> getDummyProductList() {

List<Product> listOfPerson=ecommerceser.getAllProductlist();

return listOfPerson;

}

//Delete by id

@DeleteMapping("/deleterecord/{id}")

public void deleteDummyProduct(@PathVariable("id") Integer id) {

ecommerceser.deleteProduct(id);

}

}

**ECommerceService.java**

package com.tom;

//public Product(Integer product\_id,String Product\_name,String Product\_Model\_Number,String Specifications)

import java.util.ArrayList;

import java.util.HashMap;

import java.util.List;

public class ECommerceService {

static HashMap<Integer, Product> productIdMap = getproductIdMap(); //map list

public ECommerceService(){

super();

if (productIdMap==null) {

productIdMap=new HashMap<Integer, Product>();

// Creating some objects of Product while initializing

Product product1=new Product(1, "Laptop", "Dell 15c", "12th Generation,i5,8Gb Ram,1TB hard disk");

Product product2=new Product(2, "Mobile", "Redami 11 pro", "6 GB ram, 128 GB Internal");

Product product3=new Product(3, "TV", "Sony 15ci", "Full HD ,LED,SMART Tv");

Product product4=new Product(4, "Iphone", "11", "64 GB ,IOS 14");

//adding map list of collections in java

productIdMap.put(1,product1);

productIdMap.put(2,product2);

productIdMap.put(3,product3);

productIdMap.put(4,product4);

}

}

public List<Product> getAllProductlist() {

List<Product> Productlist = new ArrayList<Product>(productIdMap.values());

return Productlist;

}

public Product getProduct(int id) {

Product Product = productIdMap.get(id);

return Product;

}

// add Product

public Product addProduct(Product Product) {

Product.setProduct\_id(getMaxId()+ 1);

// key , value

productIdMap.put(Product.getProduct\_id(), Product); ///logic class

return Product;

}

//update

public Product updateProduct(Product Product) {

if (Product.getProduct\_id() <= 0)

return null;

productIdMap.put(Product.getProduct\_id(), Product);

return Product;

}

//delete

public void deleteProduct(Integer id) {

productIdMap.remove(id);

}

public static HashMap<Integer, Product> getproductIdMap() {

return productIdMap;

}

//Delete all list

public List<Product> delAllProductlist() {

List<Product> Productlist = new ArrayList<Product>(productIdMap.values());

Productlist.subList(0, Productlist.size()).clear();

System.out.println(Productlist.size());

return Productlist;

}

// Utility method to get max id for product

public static int getMaxId() {

int max = 0;

for (int id : productIdMap.keySet()) {

if (max <= id)

max = id;

}

return max;

}

}

**Product.java**

**package** com.tom;

**public** **class** Product {

**private** Integer product\_id;

**private** String Product\_name;

**private** String Product\_Model\_Number;

**private** String Specifications;

//Constructor

**public** Product(){

**super**();

}

//Parameterized Constructor

**public** Product(Integer product\_id,String Product\_name,String Product\_Model\_Number,String Specifications) {

**super**();

**this**.product\_id=product\_id;

**this**.Product\_name=Product\_name;

**this**.Product\_Model\_Number=Product\_Model\_Number;

**this**.Specifications=Specifications;

}

**public** Integer getProduct\_id() {

**return** product\_id;

}

**public** **void** setProduct\_id(Integer product\_id) {

**this**.product\_id = product\_id;

}

**public** String getProduct\_name() {

**return** Product\_name;

}

**public** **void** setProduct\_name(String product\_name) {

Product\_name = product\_name;

}

**public** String getProduct\_Model\_Number() {

**return** Product\_Model\_Number;

}

**public** **void** setProduct\_Model\_Number(String product\_Model\_Number) {

Product\_Model\_Number = product\_Model\_Number;

}

**public** String getSpecifications() {

**return** Specifications;

}

**public** **void** setSpecifications(String specifications) {

Specifications = specifications;

}

}