GANPAT UNIVERSITY

U.V. PATEL COLLEGE OF ENGINEERING

B.Tech 5th Semester CE/IT

2CEIT5PE4: Software Packages

Practical: 7

Working with Express Framework

Que:1 Build a simple express js program to add update delete and display all products available in list of e-commerce application using get put post and delete methods. Assume that products are available on products object. Product properties are product_id product_name product_size product_brand product_color.

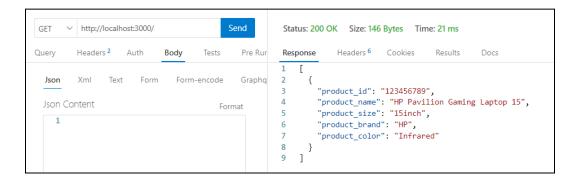
```
var express = require('express');
var bap = require('body-parser');
var app = express();
var products=[
        product id:"123456789",
        product name: "HP Pavilion Gaming Laptop 15",
        product_size:"15inch",
       product brand: "HP",
        product color:"Infrared"
    }
1;
app.use(bap.urlencoded({extended:false}));
app.use(bap.json());
app.get("/",(req,res)=>{
    res.send(products);
});
app.post("/Add Product/", (req, res) =>{
   var sdata = req.body;
   products.push(sdata);
   res.send(products);
app.put("/Edit Product/:product id", (req, res) =>{
    var old product id = req.params.product id;
    var newdata = req.body;
```

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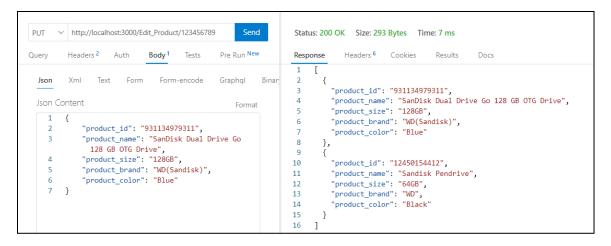
```
var index = products.findIndex((element) =>
    element.product id === old product id);
    if(index!=-1)
        products[index].product id=newdata.product id;
        products[index].product name=newdata.product name;
        products[index].product size=newdata.product size;
        products[index].product_brand=newdata.product_brand;
        products[index].product color=newdata.product color;
    res.send(products);
});
app.delete("/Delete Product/:product id", (req, res) => {
    var old product id = req.params.product id;
    products = products.filter(item => item.product id !== old product id);
    res.send(products);
});
app.listen(3000);
```

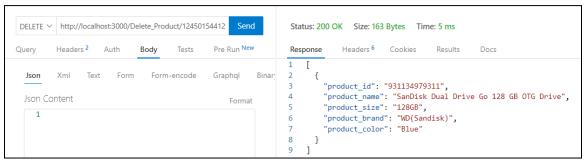
Output:

PS E:\B_Tech\SEM_5\SP\Practical\Code\Practical 7> node "e:\B_Tech\SEM_5\SP\Practical\Code\Practical 7\q1.js" \blacksquare



```
POST V http://localhost:3000/Add_Product/
                                                         Status: 200 OK Size: 276 Bytes Time: 32 ms
       Headers <sup>2</sup> Auth
                             Body 1
                                     Tests
                                                        Response
                                                                    Headers 6 Cookies
                                                                                           Results
       Xml Text Form Form-encode
                                              Graphq
 Json
                                                                  "product_id": "123456789",
                                                                  "product_name": "HP Pavilion Gaming Laptop 15",
 Json Content
                                         Format
                                                                  "product_size": "15inch",
                                                                 "product_brand": "HP",
            "product_id": "12450154412",
                                                                  "product_color": "Infrared"
   3
            "product_name": "Sandisk
              Pendrive",
            "product_size": "64GB",
                                                        10
                                                                 "product_id": "12450154412",
            "product_brand": "WD",
                                                        11
                                                                 "product_name": "Sandisk Pendrive",
            "product_color": "Black"
   6
                                                                 "product_size": "64GB",
"product_brand": "WD",
                                                        12
                                                        13
                                                                 "product_color": "Black"
                                                        14
                                                        15
                                                        16 ]
```





Que:2 Create express js program using router for e-commerce application. This application has 4 modules: order user product and category. Each module has 4 methods namely get put post and delete and has path '/' '/update-details' 'create-details' and 'delete-details respectively. For example: 'localhost:8000/product' will be accessed and the page'/' will displayed message "get method from user module" same for other 3 methods and modules.

q2.js

```
var express = require('express');
var user = require('./user.js');
var order = require('./order.js');
var product = require('./product.js');
var category = require('./category.js');
var app = express();

app.use("/user", user.router1);
app.use("/order", order.router1);
app.use("/product", product.router1);
app.use("/category", category.router1);
app.listen(3000);
```

user.js

```
var express = require('express');
var router1 = express.Router();
router1.get('/', function (req, res, next) {
    res.send("This is get method of user");
});
router1.post('/create-details', function (req, res, next) {
    res.send("This is post method of user");
});
router1.put('/update-details', function (req, res, next) {
    res.send("This is put method of user");
});
router1.delete('/delete-details', function (req, res, next) {
    res.send("This is delete method of user");
});
exports.router1=router1
```

order.js

```
var express = require('express');
var router1 = express.Router();
router1.get('/', function (req, res, next) {
    res.send("This is get method of order");
});
router1.post('/create-details', function (req, res, next) {
    res.send("This is post method of order");
});
router1.put('/update-details', function (req, res, next) {
    res.send("This is put method of order");
});
router1.delete('/delete-details', function (req, res, next) {
    res.send("This is delete method of order");
});
exports.router1=router1
```

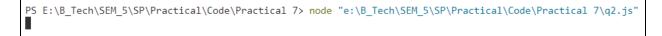
product.js

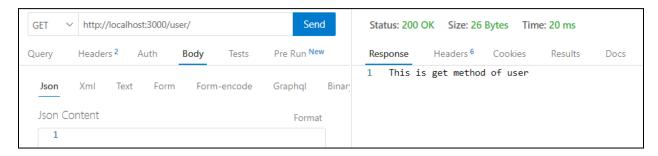
```
var express = require('express');
var router1 = express.Router();
router1.get('/', function (req, res, next) {
    res.send("This is get method of product");
});
router1.post('/create-details', function (req, res, next) {
    res.send("This is post method of product");
});
router1.put('/update-details', function (req, res, next) {
    res.send("This is put method of product");
});
router1.delete('/delete-details', function (req, res, next) {
    res.send("This is delete method of product");
});
exports.router1=router1;
```

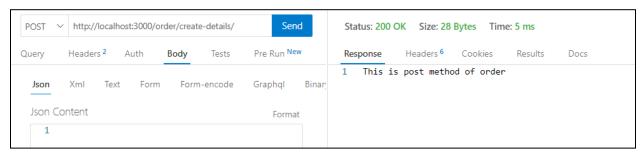
category.js

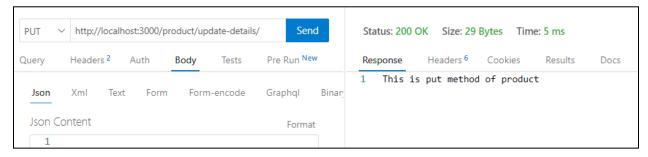
```
var express = require('express');
var router1 = express.Router();
router1.get('/', function (req, res, next) {
    res.send("This is get method of category");
});
router1.post('/create-details', function (req, res, next) {
    res.send("This is post method of category");
});
router1.put('/update-details', function (req, res, next) {
    res.send("This is put method of category");
});
router1.delete('/delete-details', function (req, res, next) {
    res.send("This is delete method of category");
});
exports.router1=router1;
```

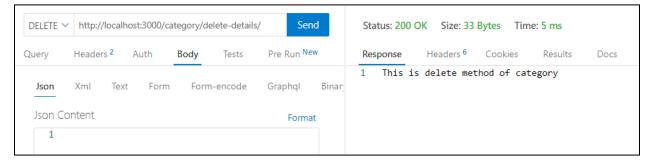
Output:











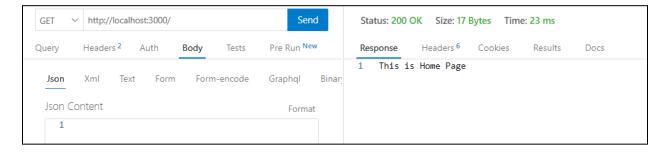
Que:3 Create express js program that employ middleware using next() function.

```
const express = require('express');
const app = express();
app.use(Employ);
app.get('/', (req, res) => {
    res.send("This is Home Page");
    console.log('This is Home Page');
});
function Employ (req, res, next) {
    console.log('This is Employ Middleware');
    next();
}
app.listen(3000);
```

Output:

```
PS E:\B_Tech\SEM_5\SP\Practical\Code\Practical 7> node "e:\B_Tech\SEM_5\SP\Practical\Code\Practical 7\q3.js"
```

```
PS E:\B_Tech\SEM_5\SP\Practical\Code\Practical 7> node "e:\B_Tech\SEM_5\SP\Practical\Code\Practical 7\q3.js"
This is Employ Middleware
This is Home Page
```



Que:4 Build a simple express js program to add update delete and display all products available in list of e-commerce application using get put post and delete methods. Using monodb database. Assume that products are available on 'products' collection in 'ecom' database. Product properties are product_id product_name product_size product_brand product_color.

```
var express = require('express');
var bap = require('body-parser');
var app = express();
const MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost/"
const dbname = "ecom";
app.use(bap.urlencoded({extended:false}));
app.use(bap.json());
app.get("/", (req, res) =>{
    MongoClient.connect(url, (err1, db) =>{
        if(err1){
            throw err1;
        else{
            var database = db.db(dbname);
            console.log("Database Successfully Connected!");
            database.collection('products').find({})
            .toArray(function(err2,data result){
                if(err2)
                     throw err2;
                else{
                    res.send(data result);
                    db.close();
            });
        }
    });
});
app.post("/Add Product/", (req, res1) =>{
    var sdata = req.body;
    MongoClient.connect(url, (err1, db) => {
        if(err1){
            throw err1;
        else{
            var database = db.db(dbname);
            console.log("Database Successfully Connected!");
            database.collection('products')
            .insertMany(sdata, function(err2, res2) {
                if(err2)
                     throw err2;
```

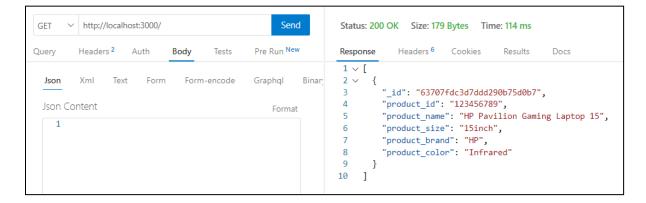
```
else{
                     console.log(res2.insertedCount+" Data inserted");
                     database.collection('products').find({})
                     .toArray(function(err3, res3){
                         if(err3)
                             throw err3;
                         else{
                             res1.send(res3);
                             db.close();
                         }
                     });
            });
        }
    });
});
app.put("/Edit Product/:product id", (req, res1) =>{
    var old product id = {"product id":req.params.product id};
    var data = req.body;
    var newdata = {$set:data};
    MongoClient.connect(url, (err1, db) =>{
        if(err1){
            throw err1;
        else{
            var database = db.db(dbname);
            console.log("Database Successfully Connected!");
            database.collection('products')
             .updateOne(old product id,newdata,function(err2,res2){
                if(err2)
                 {
                     throw err2;
                else{
                     console.log(res2.modifiedCount+" Data Updated");
                     database.collection('products').find({})
                     .toArray(function(err3, res3){
                         if(err3)
                             throw err3;
                         }
                         else{
                             res1.send(res3);
                             db.close();
                     });
                }
            });
        }
    });
});
```

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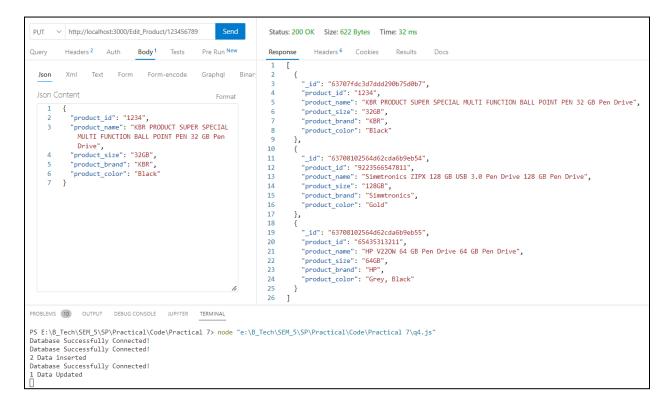
```
app.delete("/Delete Product/:product_id",(req,res1)=>{
    var old_product_id = {"product_id":req.params.product_id};
    MongoClient.connect(url, (err1, db) =>{
        if(err1){
            throw err1;
        else{
            var database = db.db(dbname);
            console.log("Database Successfully Connected!");
            database.collection('products')
            .deleteOne(old_product_id, function(err2, res2){
                if(err2)
                 {
                     throw err2;
                else{
                     console.log(res2.deletedCount+" Data Deleted");
                     database.collection('products').find({})
                     .toArray(function(err3, res3){
                         if(err3)
                             throw err3;
                         else{
                             res1.send(res3);
                             db.close();
                     });
                }
            });
        }
    });
});
app.listen(3000);
```

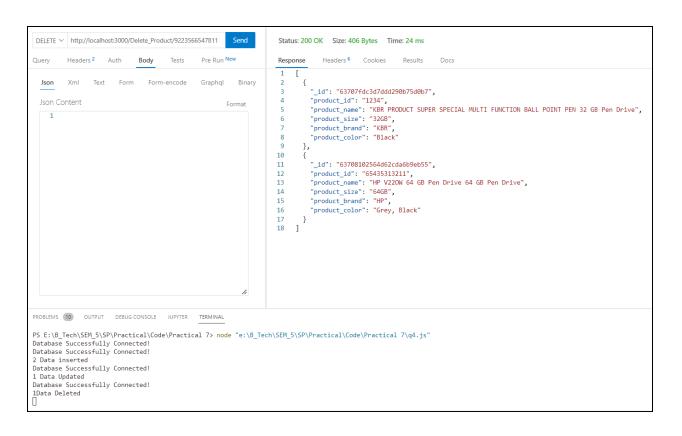
Output:

 $PS E:\B_Tech\SEM_5\SP\Practical\Code\Practical\ 7> \ \ node \\ "e:\B_Tech\SEM_5\SP\Practical\Code\Practical\ 7\q4.js" \\ []$



```
POST V http://localhost:3000/Add Product/
                                                                                                                                                        Status: 200 OK Size: 588 Bytes Time: 74 ms
                                                                                                             Pre Run New
                     Headers 2 Auth
                                                                    Body 1
                                                                                                                                                        Response
                                                                                                                                                                                   Headers 6 Cookies
                                                                                                                                                                                                                                        Results
                                     Text Form
                                                                                                             Graphql
                                                                                                                                                                             "_id": "63707fdc3d7ddd290b75d0b7",
                                                                                                                                                         4
                                                                                                                                                                             "product id": "123456789"
    Json Content
                                                                                                                      Format
                                                                                                                                                                             "product_name": "HP Pavilion Gaming Laptop 15",
                                                                                                                                                        5
                                                                                                                                                                              "product_size": "15inch",
                       [
                                                                                                                                                         6
                                                                                                                                                                             "product_brand": "HP",
                                  "product_id": "9223566547811",
                                                                                                                                                                              "product_color": "Infrared"
                                  "product_name": "Simmtronics ZIPX 128 GB
                                     USB 3.0 Pen Drive 128 GB Pen Drive",
                                 "product_size": "128GB",
                                                                                                                                                                             "_id": "63708102564d62cda6b9eb54",
                                                                                                                                                       11
                                  "product_brand": "Simmtronics",
                                                                                                                                                       12
                                                                                                                                                                            "product_id": "9223566547811",
                                 "product_color": "Gold"
                                                                                                                                                                            "product_name": "Simmtronics ZIPX 128 GB USB 3.0 Pen Drive 128 GB Pen Drive", "product_size": "128GB",
                                                                                                                                                       13
             8
                                                                                                                                                       14
             9
                                                                                                                                                                            "product_brand": "Simmtronics",
"product_color": "Gold"
                                                                                                                                                       15
                                  "product_id": "65435313211",
           10
                                                                                                                                                       16
                                "product_name": "HP V220W 64 GB Pen
          11
                                                                                                                                                       17
                                    Drive 64 GB Pen Drive",
                                                                                                                                                       18
                                 "product_size": "64GB",
           12
                                                                                                                                                                           "_id": "63708102564d62cda6b9eb55",
                                                                                                                                                       19
                                 "product_brand": "HP",
          13
                                                                                                                                                                           20
                                  "product_color": "Grey, Black"
           14
                                                                                                                                                                             "product_name": "HP V220W 64 GB Pen Drive 64 GB Pen Drive",
                                                                                                                                                       21
           15
                                                                                                                                                       22
                                                                                                                                                                              "product_size": "64GB",
           16
                      ]
                                                                                                                                                       23
                                                                                                                                                                             "product_brand": "HP",
                                                                                                                                                       24
                                                                                                                                                                             "product_color": "Grey, Black"
                                                                                                                                                       25
                                                                                                                                                       26
                                                                                                                                                                   1
 PROBLEMS 10 OUTPUT DEBUG CONSOLE JUPYTER
                                                                                                           TERMINAL
PS E: \B_{Tech}SEM_5\SP\Practical\Code\Practical\ 7> node "e: \B_{Tech}SEM_5\SP\Practical\Code\Practical\ 7\q4.js" and the proof of t
Database Successfully Connected!
Database Successfully Connected!
 2 Data inserted
```





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