

# Question

For this question, you are needed to make a backend system for an e-commerce website and complete the endpoints according to the given output.

## Requirements

Make database models according to the system specifications and complete the api endpoints to **match the sample response**. Using Django Rest Framework is preferable.

**N.B:** No need to add any authentication module for this.

## System specification

This e-commerce system should support CRUD operations on products. A product has these properties:

- Has a unique id
- Product name
- A thumbnail and gallery pictures (all urls)
- Description
- Price and discounted price (if there is discount)
- Available colours (this can vary and increase or decrease in future but won't exceed 20)
- Availble sizes (can vary in the future as well but won't exceed 10)
- Product rating (out of 10)

Suppose that, our system doesn't need to count the number of remaining items in the inventory and will always have enough products to deliver any order.

A customer has these properties:

- Has a unique id
- Customer name
- Mobile number
- Email address
- Permenant address
- Saved address (customers can save shipping or billing addresses here)
- Profile picture (url)

Customers can make orders. Orders can be refunded.

An order has these properties:

- A unique id
- Customer who ordered it
- Date
- Products ordered
- Total price
- Delivery status (In review, Being delivered, Completed, Cancelled)
- A refund status (Yes or No)
- Shipping address
- Billing address

# Endpoints and Sample responses

## /products/

Methods: GET, POST

### Sample response

```
[
  {
    "id": 1,
    "name": "Mobile cover",
    "price": 200,
    "is_discounted": false,
    "discounted_price": null,
    "thumbnail": "https://www.google.com"
  },
  {
    "id": 2,
    "name": "Apple airpods",
    "price": 2000,
    "is_discounted": true,
    "discounted_price": 1500,
    "thumbnail": "https://www.yahoo.com"
  }
]
```

### Sample POST request

```
{
  "name": "Apple airpods",
  "price": 2000,
  "is_discounted": true,
  "discounted_price": 1500,
  "thumbnail": "https://www.yahoo.com",
  "gallery": [
    "https://www.facebook.com",
    "https://www.twitter.com",
    "https://www.youtube.com"
  ],
  "rating": 8.15,
  "available_colours": [
    "red",
    "silver",
    "black",
    "white",
    "gold"
  ],
  "available_sizes": [],
  "description": "Airpod from apple. Your best music companion"
}
```

## **/products/id**

Methods: GET, PATCH, PUT, DELETE

### **Sample response**

```
{
  "id": 2,
  "name": "Apple airpods",
  "price": 2000,
  "is_discounted": true,
  "discounted_price": 1500,
  "thumbnail": "https://www.yahoo.com",
  "gallery": [
    "https://www.facebook.com",
    "https://www.twitter.com",
    "https://www.youtube.com"
  ],
  "rating": 8.15,
  "available_colours": [
    "red",
    "silver",
    "black",
    "white",
    "gold"
  ],
  "available_sizes": [],
  "description": "Airpod from apple. Your best music companion"
}
```

## **/customers/**

Methods: GET, POST

### **Sample response**

```
[
  {
    "id": 1,
    "name": "Elon Musk",
    "email": "musk@gmail.com",
    "mobile_number": "+880122222",
    "profile_picture": "https://www.google.com"
  },
  {
    "id": 2,
    "name": "Bill Gates",
    "email": "gates@hotmail.com",
    "mobile_number": null,
    "profile_picture": null
  }
]
```

## Sample POST request

```
{
  "name": "Bill Gates",
  "email": "gates@hotmail.com",
  "mobile_number": null,
  "profile_picture": null,
  "permanent_address": {
    "name": "permenant",
    "address": "P. Sherman, 42, Wallaby way, Sydney"
  },
  "saved_addresses": [
    {
      "name": "home",
      "address": "120, Rosemary lane, London, England"
    }
  ]
}
```

## /customers/id

Methods: GET, PATCH, PUT, DELETE

## Sample response

```
{
  "id": 2,
  "name": "Bill Gates",
  "email": "gates@hotmail.com",
  "mobile_number": null,
  "profile_picture": null,
  "permanent_address": {
    "name": "permenant",
    "address": "P. Sherman, 42, Wallaby way, Sydney"
  },
  "saved_addresses": [
    {
      "name": "home",
      "address": "120, Rosemary lane, London, England"
    }
  ]
}
```

## **/orders/**

Methods: GET, POST

### **Sample response**

```
[
  {
    "id": 1,
    "customer_id": 1,
    "total_price": 200,
    "delivery_status": "completed",
    "refund_status": false,
    "date": "2020-12-04"
  },
  {
    "id": 2,
    "customer_id": 2,
    "total_price": 2000,
    "delivery_status": "completed",
    "refund_status": true,
    "date": "2020-11-04"
  },
  {
    "id": 3,
    "customer_id": 2,
    "total_price": 1500,
    "delivery_status": "being delivered",
    "refund_status": false,
    "date": "2020-12-04"
  }
]
```

## Sample POST request

```
{
  "customer_id": 2,
  "total_price": 2000,
  "delivery_status": "completed",
  "refund_status": true,
  "date": "2020-11-04",
  "product_list": [
    {
      "id": 2,
      "quantity": 1,
      "price": 2000,
      "colour": "black",
      "size": null
    }
  ],
  "billing_address": {
    "name": "home"
  },
  "shipping_address": {
    "name": null,
    "address": "12/A Baker street, New London"
  }
}
```

## **/orders/id**

Methods: GET, PATCH, PUT, DELETE

### **Sample response**

```
{
  "id": 2,
  "customer_id": 2,
  "total_price": 2000,
  "delivery_status": "completed",
  "refund_status": true,
  "date": "2020-11-04",
  "product_list": [
    {
      "id": 2,
      "quantity": 1,
      "price": 2000,
      "colour": "black",
      "size": null
    }
  ],
  "billing_address": {
    "name": "home",
    "address": "120, Rosemary lane, London, England"
  },
  "shipping_address": {
    "name": null,
    "address": "12/A Baker street, New London"
  }
}
```