Hotel room booking application

****I have User Intelijj Community Edition hence all application should be ran separately*****

1. **Booking service** - This service is responsible for collecting all information related to user booking and sending a confirmation message once the booking is confirmed.

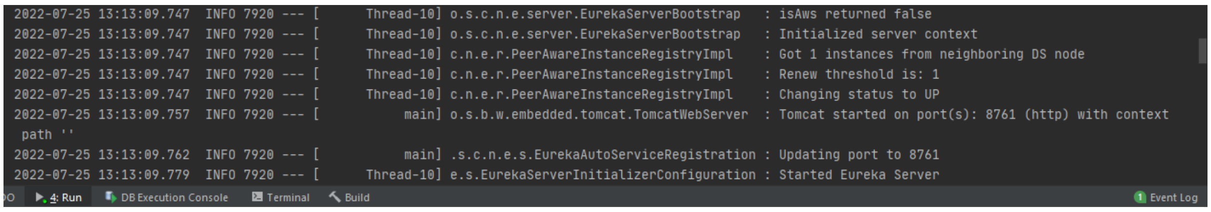
2. **Payment service** - This is a dummy payment service; this service is called by the booking service for initiating payment after confirming rooms.

3. **Eureka-service** – Setup of the eureka server for registering both the application.

Important Note: Database used is H2. ****

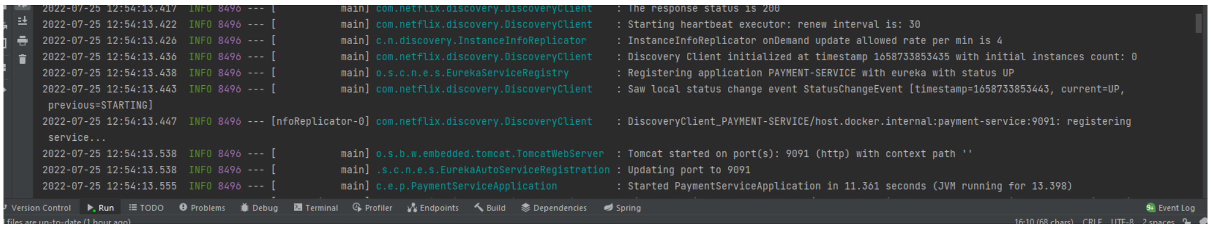
Step 1: Start Booking-service, Payment-service application and Eureka-server application.

Eureka server:



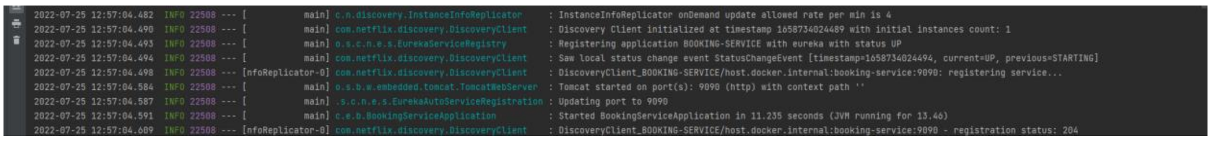
```
2022-07-25 13:13:09.747  INFO 7920 --- [      Thread-10] o.s.c.n.e.server.EurekaServerBootstrap   : isAws returned false
2022-07-25 13:13:09.747  INFO 7920 --- [      Thread-10] o.s.c.n.e.server.EurekaServerBootstrap   : Initialized server context
2022-07-25 13:13:09.747  INFO 7920 --- [      Thread-10] c.n.e.r.PeerAwareInstanceRegistryImpl    : Got 1 instances from neighboring DS node
2022-07-25 13:13:09.747  INFO 7920 --- [      Thread-10] c.n.e.r.PeerAwareInstanceRegistryImpl    : Renew threshold is: 1
2022-07-25 13:13:09.747  INFO 7920 --- [      Thread-10] c.n.e.r.PeerAwareInstanceRegistryImpl    : Changing status to UP
2022-07-25 13:13:09.757  INFO 7920 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 8761 (http) with context
 path ''
2022-07-25 13:13:09.762  INFO 7920 --- [           main] .s.c.n.e.s.EurekaAutoServiceRegistration : Updating port to 8761
2022-07-25 13:13:09.779  INFO 7920 --- [      Thread-10] e.s.EurekaServerInitializerConfiguration : Started Eureka Server
```

Payment Server:



```
2022-07-25 12:54:13.417  INFO 8496 --- [           main] com.netflix.discovery.DiscoveryClient    : The response status is 200
2022-07-25 12:54:13.422  INFO 8496 --- [           main] com.netflix.discovery.DiscoveryClient    : Starting heartbeat executor: renew interval is: 30
2022-07-25 12:54:13.426  INFO 8496 --- [           main] c.n.discovery.InstanceInfoReplicator     : InstanceInfoReplicator onDemand update allowed rate per min is 4
2022-07-25 12:54:13.436  INFO 8496 --- [           main] com.netflix.discovery.DiscoveryClient    : Discovery Client initialized at timestamp 1658733853435 with initial instances count: 0
2022-07-25 12:54:13.438  INFO 8496 --- [           main] o.s.c.n.e.s.EurekaServiceRegistry        : Registering application PAYMENT-SERVICE with eureka with status UP
2022-07-25 12:54:13.443  INFO 8496 --- [           main] com.netflix.discovery.DiscoveryClient    : Saw local status change event StatusChangeEvent [timestamp=1658733853443, current=UP,
 previous=STARTING]
2022-07-25 12:54:13.447  INFO 8496 --- [nfoReplicator-0] com.netflix.discovery.DiscoveryClient    : DiscoveryClient_PAYMENT-SERVICE/host.docker.internal:payment-service:9091: registering
 service...
2022-07-25 12:54:13.538  INFO 8496 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 9091 (http) with context path ''
2022-07-25 12:54:13.538  INFO 8496 --- [           main] .s.c.n.e.s.EurekaAutoServiceRegistration : Updating port to 9091
2022-07-25 12:54:13.555  INFO 8496 --- [           main] c.e.p.PaymentServiceApplication          : Started PaymentServiceApplication in 11.361 seconds (JVM running for 13.398)
```

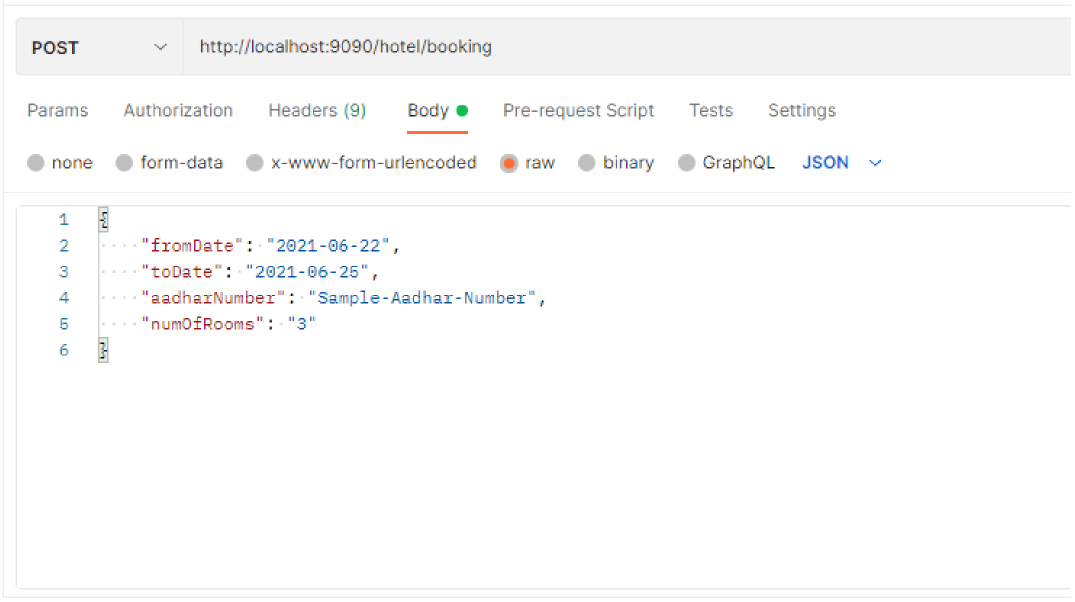
Booking Server:



```
2022-07-25 12:57:04.482  INFO 22508 --- [           main] c.n.discovery.InstanceInfoReplicator     : InstanceInfoReplicator onDemand update allowed rate per min is 4
2022-07-25 12:57:04.490  INFO 22508 --- [           main] com.netflix.discovery.DiscoveryClient    : Discovery Client initialized at timestamp 1658734024489 with initial instances count: 1
2022-07-25 12:57:04.493  INFO 22508 --- [           main] o.s.c.n.e.s.EurekaServiceRegistry        : Registering application BOOKING-SERVICE with eureka with status UP
2022-07-25 12:57:04.494  INFO 22508 --- [           main] com.netflix.discovery.DiscoveryClient    : Saw local status change event StatusChangeEvent [timestamp=1658734024494, current=UP, previous=STARTING]
2022-07-25 12:57:04.498  INFO 22508 --- [nfoReplicator-0] com.netflix.discovery.DiscoveryClient    : DiscoveryClient_BOOKING-SERVICE/host.docker.internal:booking-service:9090: registering service...
2022-07-25 12:57:04.584  INFO 22508 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 9090 (http) with context path ''
2022-07-25 12:57:04.587  INFO 22508 --- [           main] .s.c.n.e.s.EurekaAutoServiceRegistration : Updating port to 9090
2022-07-25 12:57:04.591  INFO 22508 --- [           main] c.e.b.BookingServiceApplication          : Started BookingServiceApplication in 11.235 seconds (JVM running for 13.46)
2022-07-25 12:57:04.609  INFO 22508 --- [nfoReplicator-0] com.netflix.discovery.DiscoveryClient    : DiscoveryClient_BOOKING-SERVICE/host.docker.internal:booking-service:9090 - registration status: 204
```

API Number 1 (Booking Service):

API: http://localhost:9090/hotel/booking



POST http://localhost:9090/hotel/booking

Params | Authorization | Headers (9) | Body | Pre-request Script | Tests | Settings

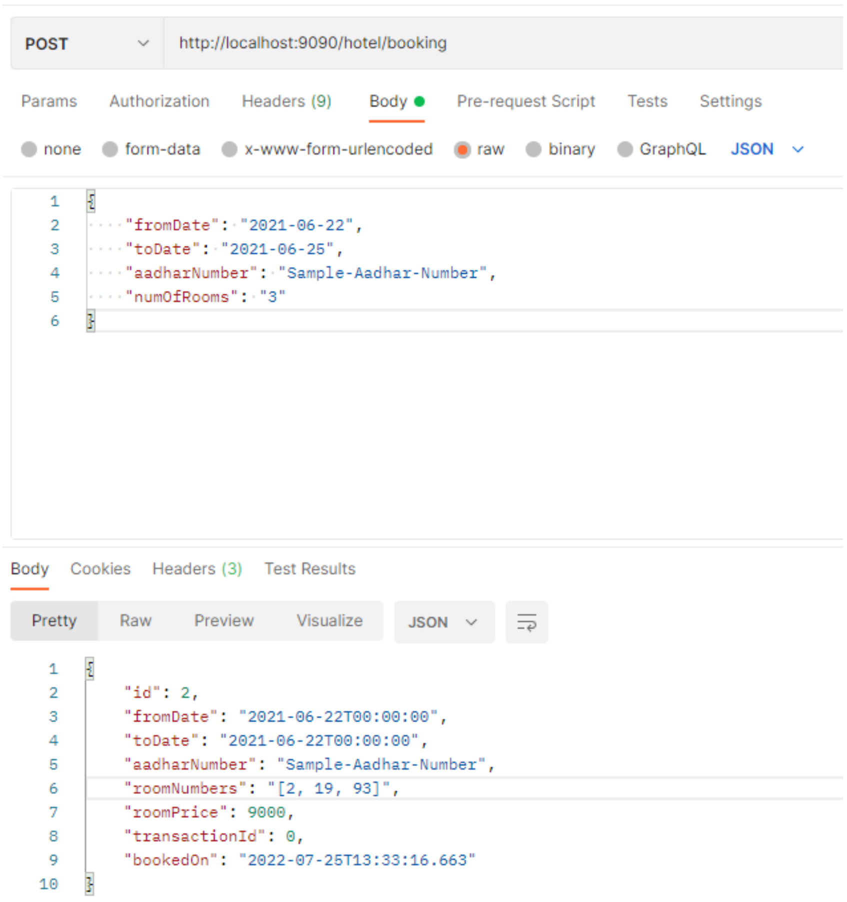
none | form-data | x-www-form-urlencoded | raw | binary | GraphQL | JSON

```
{
    "fromDate": "2021-06-22",
    "toDate": "2021-06-25",
    "aadharNumber": "Sample-Aadhar-Number",
    "numOfRooms": "3"
}
```

Response for booking service amount generated with particular set of code as shown below

```
(1000 * request.getNumOfRooms() * numberOfDays))
```

Response initial transactionId is 0 at the start as per the requirement.



POST http://localhost:9090/hotel/booking

Params | Authorization | Headers (9) | Body | Pre-request Script | Tests | Settings

none | form-data | x-www-form-urlencoded | raw | binary | GraphQL | JSON

```
{
    "fromDate": "2021-06-22",
    "toDate": "2021-06-25",
    "aadharNumber": "Sample-Aadhar-Number",
    "numOfRooms": "3"
}
```

Body | Cookies | Headers (3) | Test Results

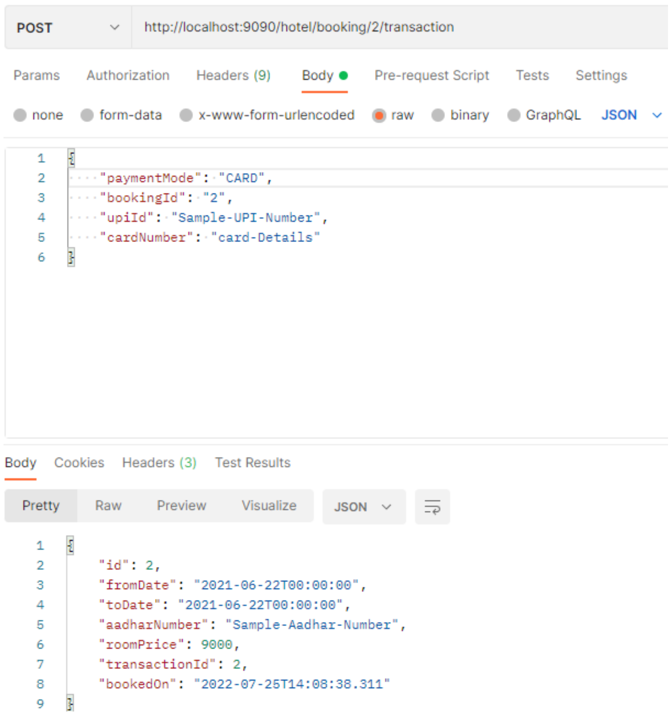
Pretty | Raw | Preview | Visualize | JSON

```
{
    "id": 2,
    "fromDate": "2021-06-22T00:00:00",
    "toDate": "2021-06-22T00:00:00",
    "aadharNumber": "Sample-Aadhar-Number",
    "roomNumbers": "[2, 19, 93]",
    "roomPrice": 9000,
    "transactionId": 0,
    "bookedOn": "2022-07-25T13:33:16.663"
}
```

API number 2: To get the transaction details.

This API makes a call too payment service to store the values into transaction table, which will help in generating transactionId which can we use to check weather payment against particular booking is completed or is incomplete.

POST API http://localhost:9090/hotel/booking/2/transaction



POST http://localhost:9090/hotel/booking/2/transaction

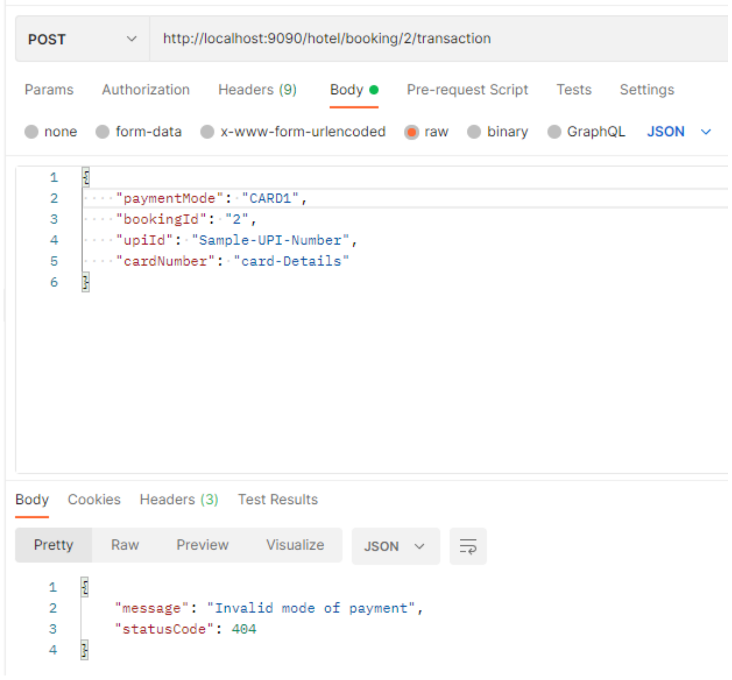
Body: raw JSON

```
{
    "paymentMode": "CARD",
    "bookingId": "2",
    "upiId": "Sample-UPI-Number",
    "cardNumber": "card-Details"
}
```

Response (Body, JSON):

```
{
    "id": 2,
    "fromDate": "2021-06-22T00:00:00",
    "toDate": "2021-06-22T00:00:00",
    "aadharNumber": "Sample-Aadhar-Number",
    "roomPrice": 9000,
    "transactionId": 2,
    "bookedOn": "2022-07-25T14:08:38.311"
}
```

There are few checks involved.
1. Payment Mode should be only in **"CARD"** or **"UPI",** if payment Mode is done using any other way error will be displayed stating `"message": "Invalid mode of payment".`



POST http://localhost:9090/hotel/booking/2/transaction

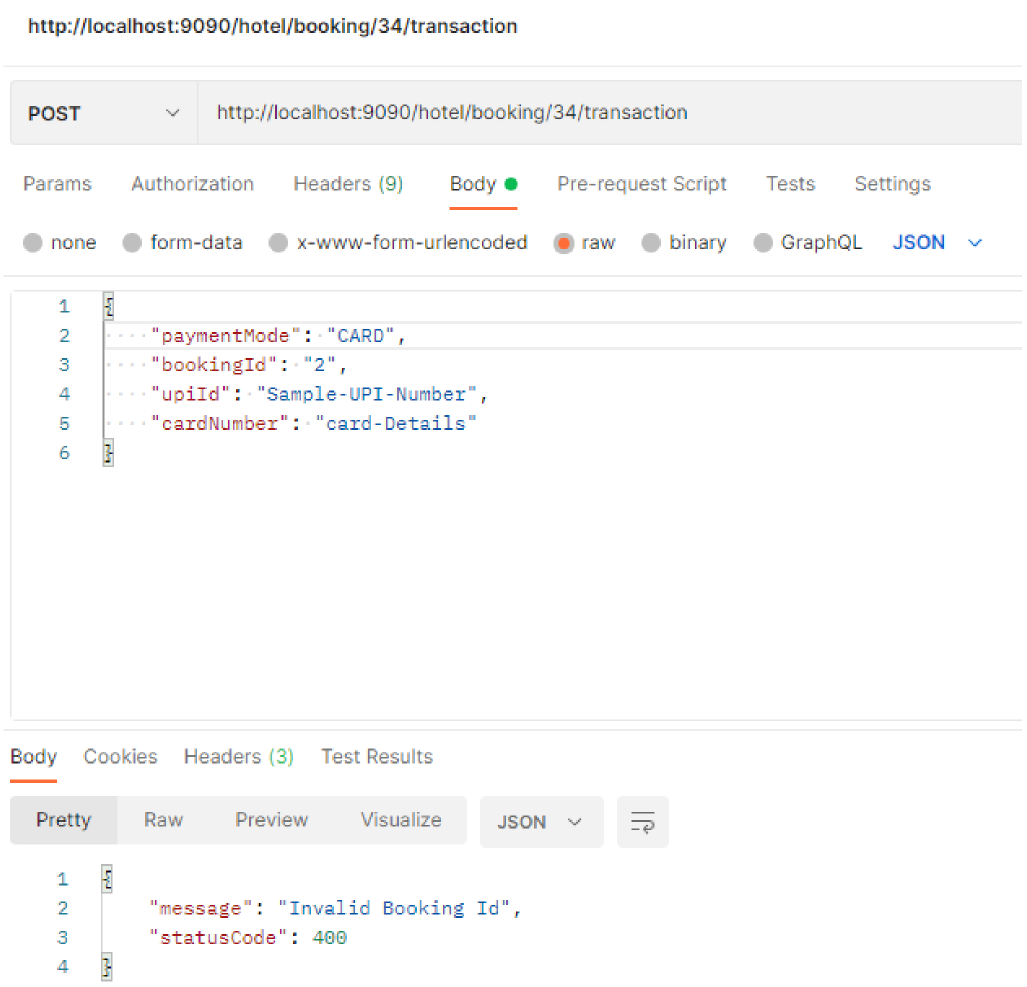
Body: raw JSON

```
{
    "paymentMode": "CARD1",
    "bookingId": "2",
    "upiId": "Sample-UPI-Number",
    "cardNumber": "card-Details"
}
```

Response (Body, JSON):

```
{
    "message": "Invalid mode of payment",
    "statusCode": 404
}
```

2. Add on check for Invalid bookingId, if we have any invalid booking id response generated will be as follows for the particular API



http://localhost:9090/hotel/booking/34/transaction

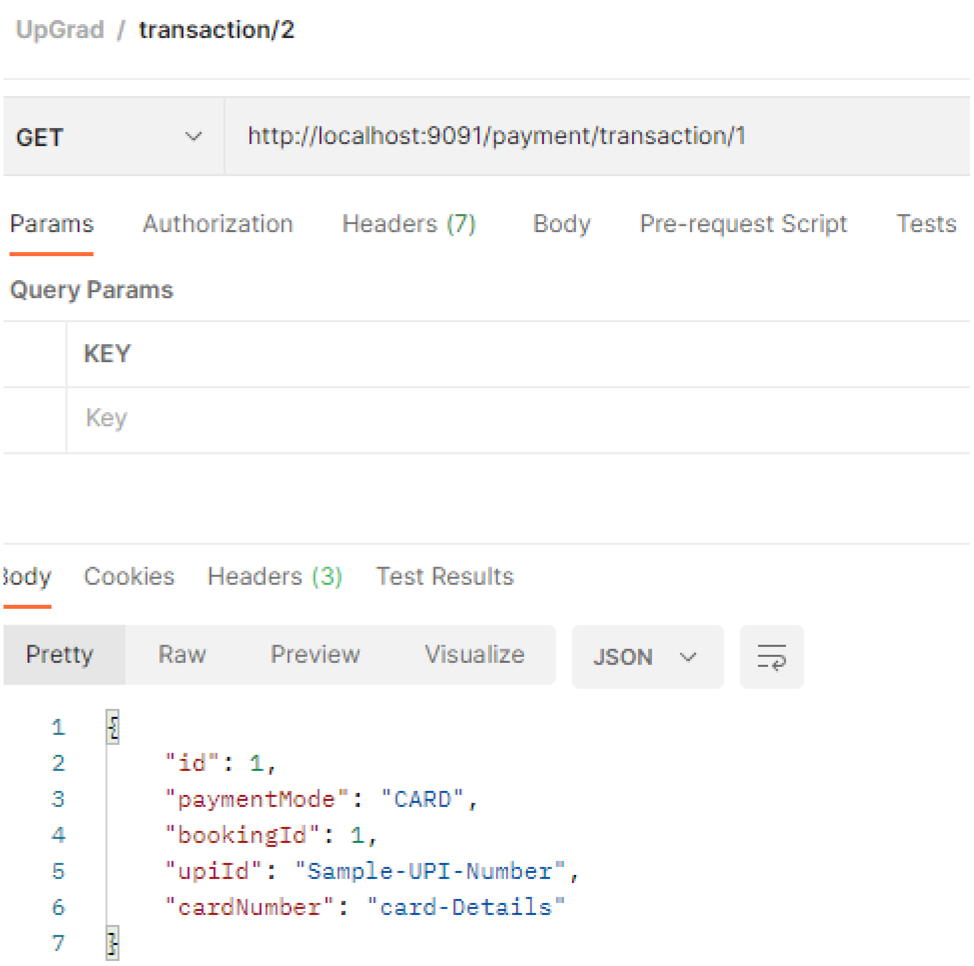
```
{
    "paymentMode": "CARD",
    "bookingId": "2",
    "upiId": "Sample-UPI-Number",
    "cardNumber": "card-Details"
}
```

```
{
    "message": "Invalid Booking Id",
    "statusCode": 400
}
```

Payment Service:

Get API to get the transaction details.

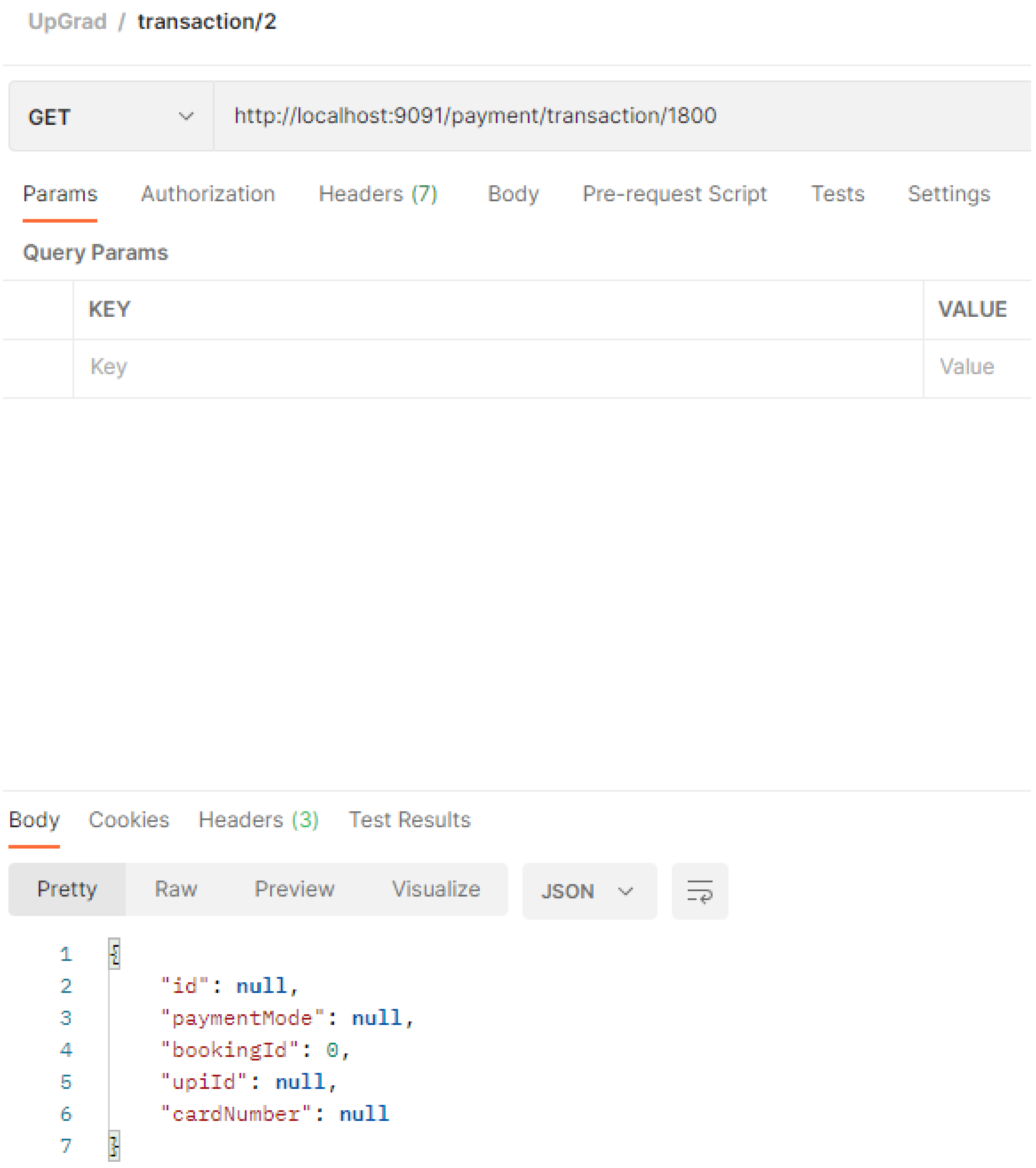
For a valid transaction, following will be the response.



```
http://localhost:9091/payment/transaction/1
```

```
{
    "id": 1,
    "paymentMode": "CARD",
    "bookingId": 1,
    "upiId": "Sample-UPI-Number",
    "cardNumber": "card-Details"
}
```

If any invalid data is passed response will be null and if we have a transaction with respect to booking it will respond with a transactionId.



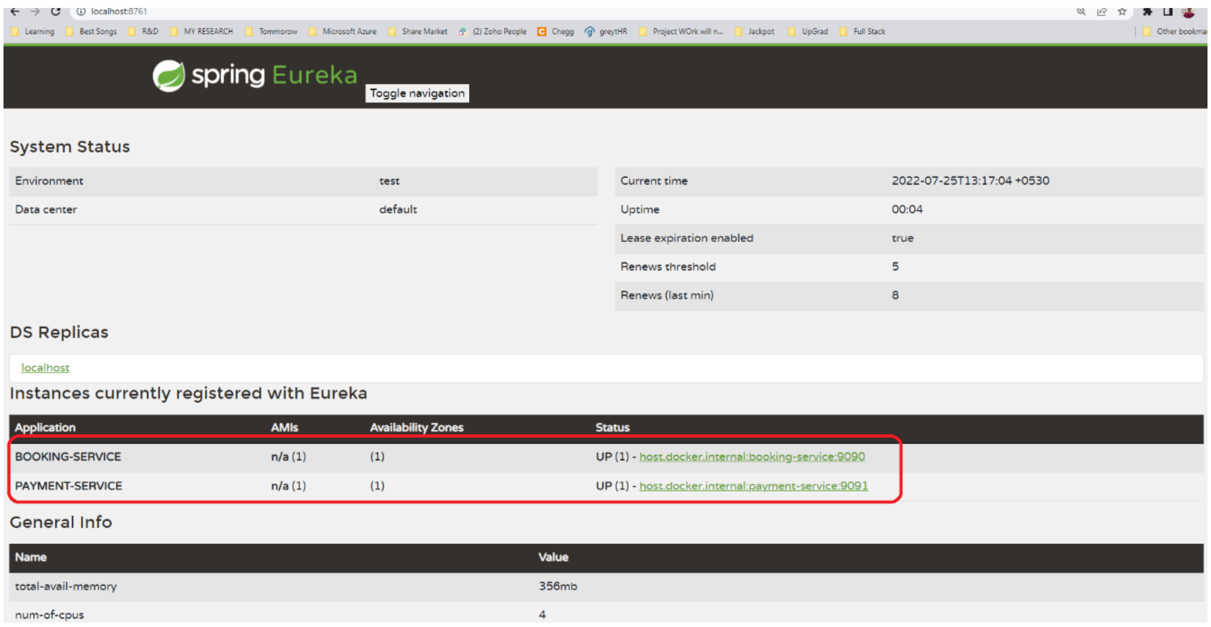
```
http://localhost:9091/payment/transaction/1800
```

```
{
    "id": null,
    "paymentMode": null,
    "bookingId": 0,
    "upiId": null,
    "cardNumber": null
}
```

We have another API which is called using booking Application, where in we generate the Transaction Id with respect to the payment done.

Eureka Service:

Post all the configuration both the application booking and payment application will be registered in eureka server.



System Status

Environment	test
Data center	default

Current time	2022-07-25T13:17:04 +0530
Uptime	00:04
Lease expiration enabled	true
Renews threshold	5
Renews (last min)	8

DS Replicas

localhost

Instances currently registered with Eureka

Application	AMIs	Availability Zones	Status
BOOKING-SERVICE	n/a (1)	(1)	UP (1) - host.docker.internal:booking-service:9090
PAYMENT-SERVICE	n/a (1)	(1)	UP (1) - host.docker.internal:payment-service:9091

General Info

Name	Value
total-avail-memory	356mb
num-of-cpus	4