# ZomentumTask
Movie Theatre Ticket Booking API services

#Tech and Frameworks used:
For Database: MongoDB
Runtime Environment: NodeJs
Framework: ExpressJs

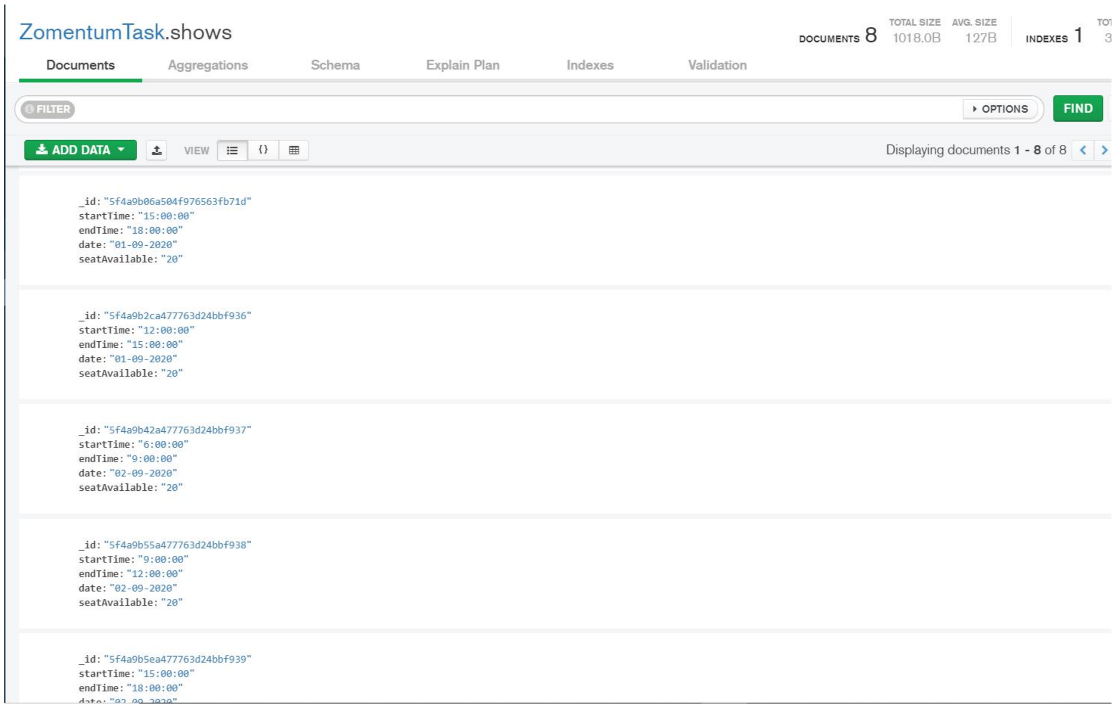
#Functionalities involved:
1.Book a Movie Ticket.
2.Update the previously booked Ticket Timings.
3.View all the tickets for a particular time/show.
4.Delete a particular ticket.
5.View User based on ticket ID.

#Schema Involved
As we gonna have shows for which user books a ticket.So,a Show Schema is there which contain some information about show.

Show Schema:
StartTime: When the Show started,
EndTime: When the show end,
Date: Date of the show,
SeatAvailable: Number of seats which are free / to be filled

StartTime, EndTime & Date can together point out a show with information of number of seats available.

For this, I have made some dataset which is as:



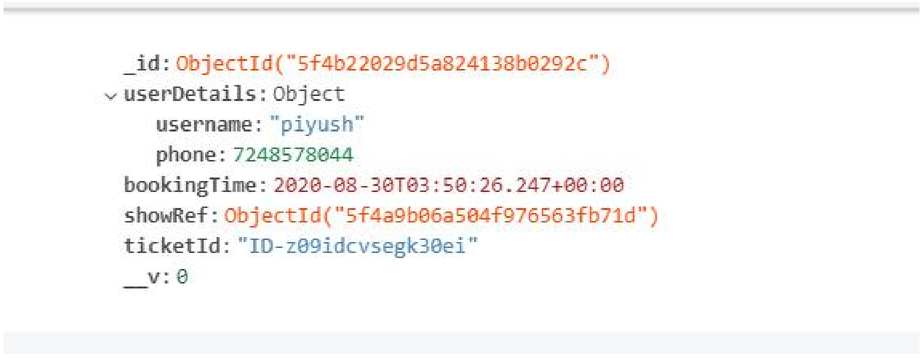
```
_id: "5f4a9b06a504f976563fb71d"
startTime: "15:00:00"
endTime: "18:00:00"
date: "01-09-2020"
seatAvailable: "20"

_id: "5f4a9b2ca477763d24bbf936"
startTime: "12:00:00"
endTime: "15:00:00"
date: "01-09-2020"
seatAvailable: "20"

_id: "5f4a9b42a477763d24bbf937"
startTime: "6:00:00"
endTime: "9:00:00"
date: "02-09-2020"
seatAvailable: "20"

_id: "5f4a9b55a477763d24bbf938"
startTime: "9:00:00"
endTime: "12:00:00"
date: "02-09-2020"
seatAvailable: "20"

_id: "5f4a9b5ea477763d24bbf939"
startTime: "15:00:00"
endTime: "18:00:00"
```

After that,there is a Ticket Schema involved which contains following information,

Ticket Schema:

```
Ticket Id: Uniquely generated at time of ticket booking,
Booking Timing: Time when ticket was booked,
UserDetails:{
      username: Name of user booking the ticket,
      phone: Mobile Number of the user
}
ShowReference: ObjectId of the show of which User is booking
            the ticket
```

Key-Value representation-



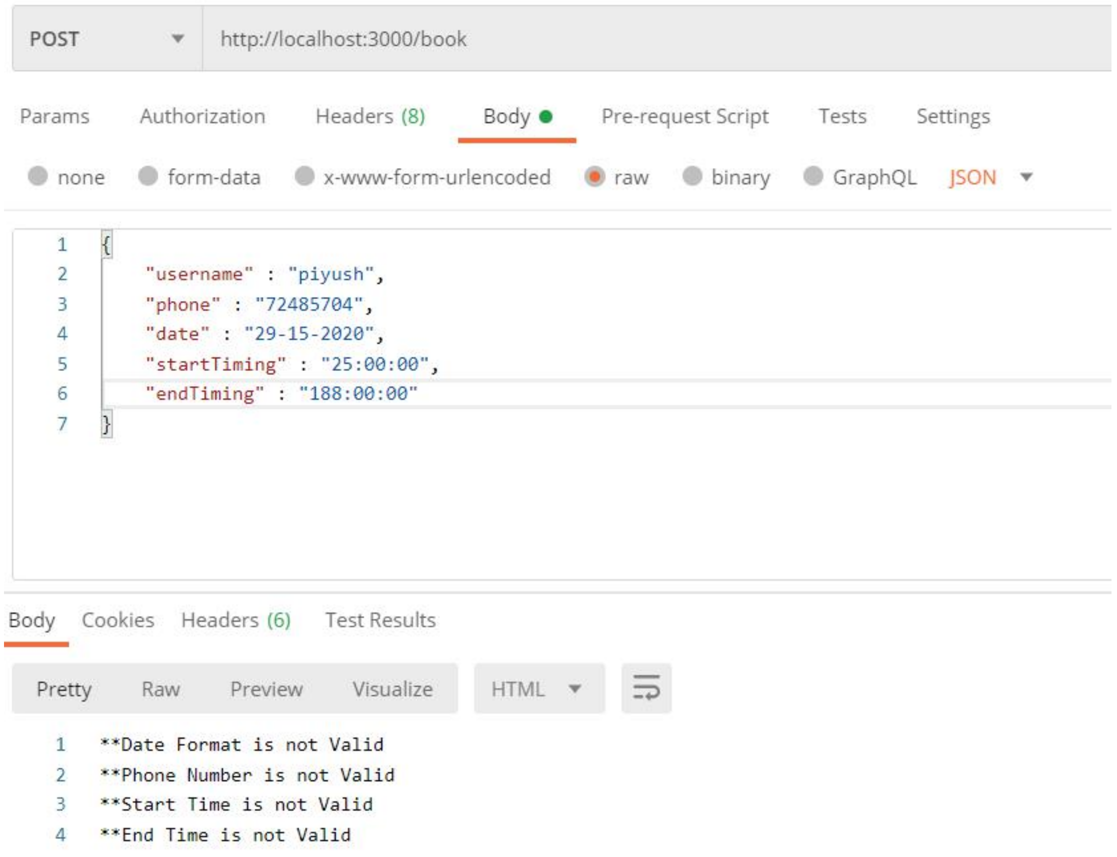
```
_id: ObjectId("5f4b22029d5a824138b0292c")
userDetails: Object
  username: "piyush"
  phone: 7248578044
bookingTime: 2020-08-30T03:50:26.247+00:00
showRef: ObjectId("5f4a9b06a504f976563fb71d")
ticketId: "ID-z09idcvsegk30ei"
__v: 0
```

#Book a Ticket

API will get some information and a command to book a ticket.

```
Information received will be:
{
   "username" : Name of the User,
   "phone" : Phone Number of the user,
   "date" : Date of the show,
   "startTiming" : - ,
   "endTiming" : -
}
```

After that program will validate if format of information received id valid or not. If not, it will send a error message to user.

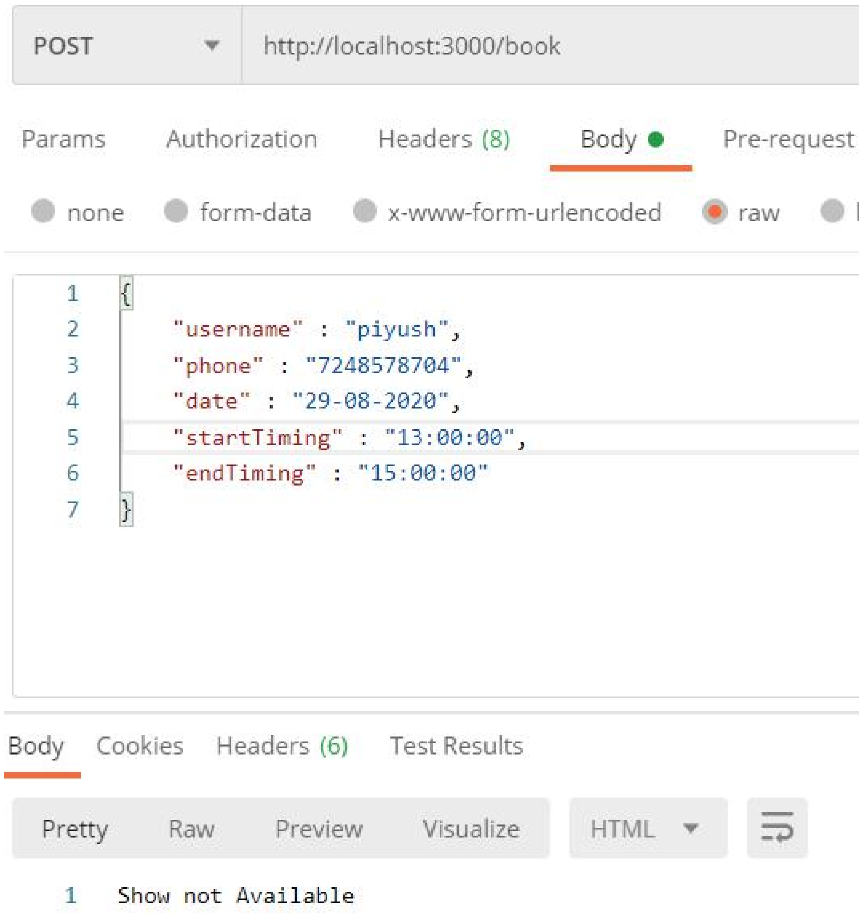


http://localhost:3000/book

```
{
    "username" : "piyush",
    "phone" : "72485704",
    "date" : "29-15-2020",
    "startTiming" : "25:00:00",
    "endTiming" : "188:00:00"
}
```

```
**Date Format is not Valid
**Phone Number is not Valid
**Start Time is not Valid
**End Time is not Valid
```

If all the information received is valid, then program chack if such show timing is available or not. If not then:


POST http://localhost:3000/book

Params Authorization Headers (8) Body Pre-request

none form-data x-www-form-urlencoded [✓ raw]

```
{
    "username" : "piyush",
    "phone" : "7248578704",
    "date" : "29-08-2020",
    "startTiming" : "13:00:00",
    "endTiming" : "15:00:00"
}
```

Body Cookies Headers (6) Test Results

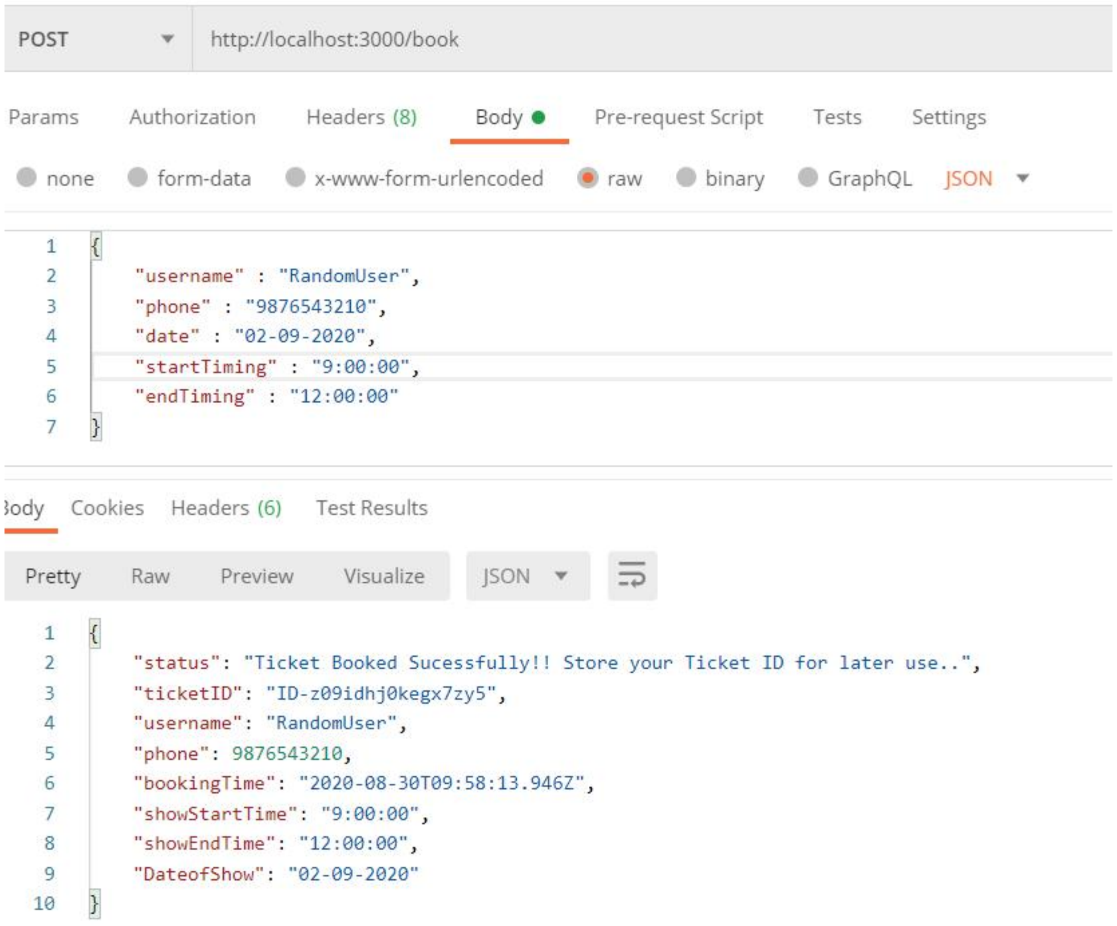
Pretty Raw Preview Visualize HTML

```
Show not Available
```

```
**Show Not Available**
```

If all OK, then program book a ticket for that show and after that **decrease a seatAvailable value in that show by One(1).**

Output user get:



```
http://localhost:3000/book
```

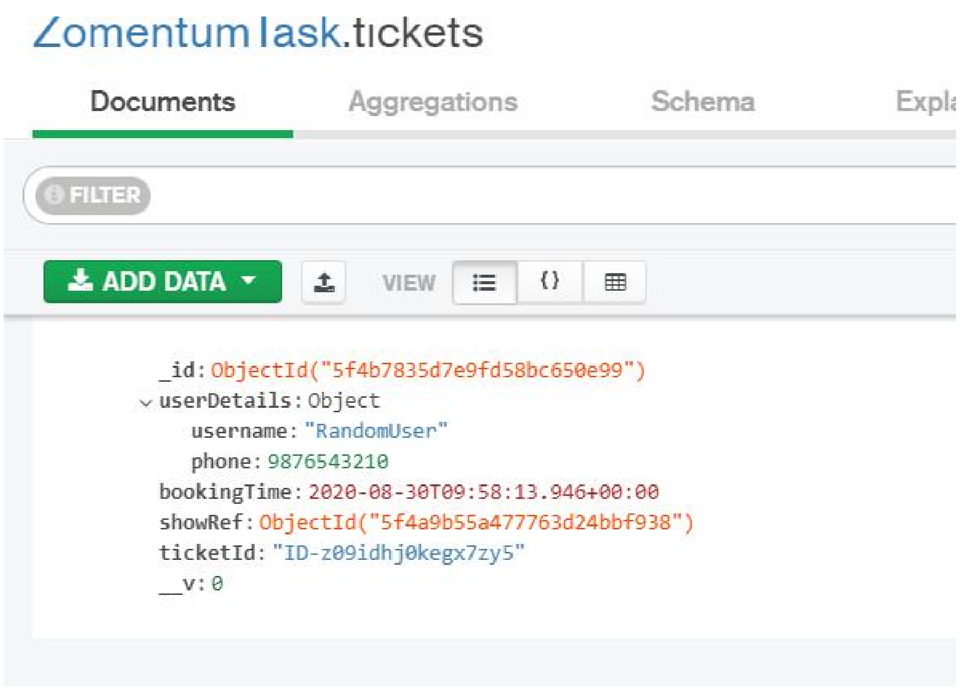
Body: raw [✓ JSON]

```
{
    "username" : "RandomUser",
    "phone" : "9876543210",
    "date" : "02-09-2020",
    "startTiming" : "9:00:00",
    "endTiming" : "12:00:00"
}
```

```
{
    "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
    "ticketID": "ID-z09idhj0kegx7zy5",
    "username": "RandomUser",
    "phone": 9876543210,
    "bookingTime": "2020-08-30T09:58:13.946Z",
    "showStartTime": "9:00:00",
    "showEndTime": "12:00:00",
    "DateofShow": "02-09-2020"
}
```

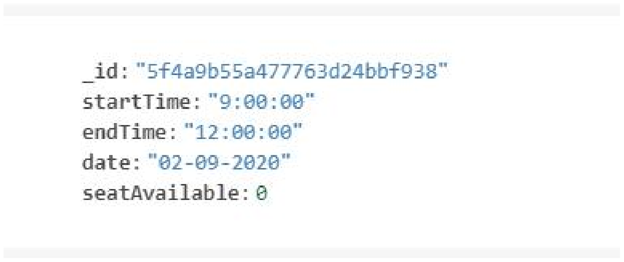
Ticket Id is uniquely generated using uniqid module.

Ticket saved in Database:



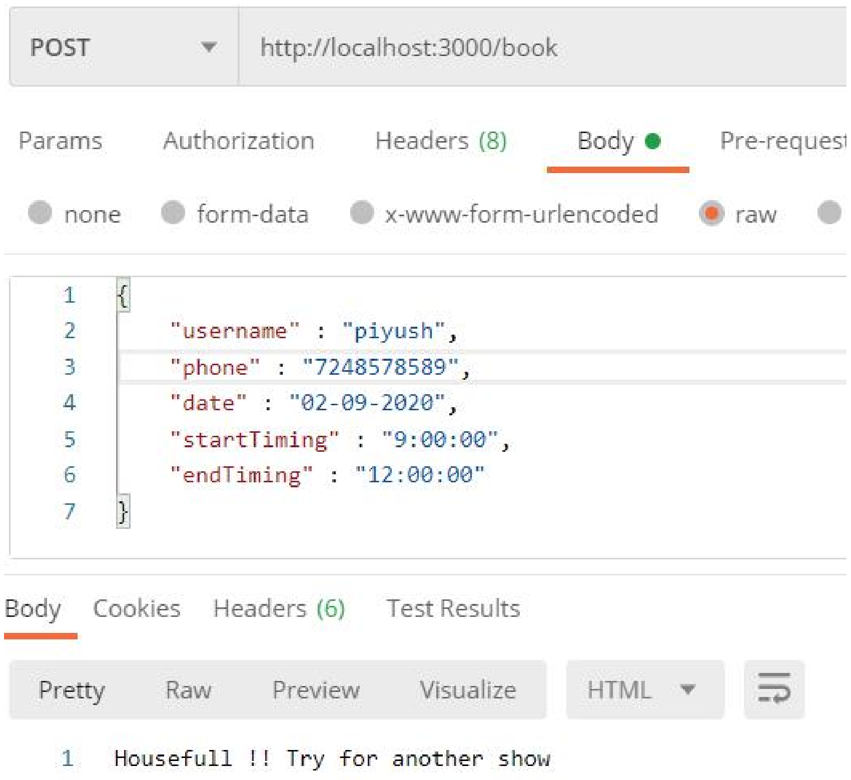
```
_id: ObjectId("5f4b7835d7e9fd58bc650e99")
userDetails: Object
   username: "RandomUser"
   phone: 9876543210
bookingTime: 2020-08-30T09:58:13.946+00:00
showRef: ObjectId("5f4a9b55a477763d24bbf938")
ticketId: "ID-z09idhj0kegx7zy5"
__v: 0
```

If seats not available:



```
_id: "5f4a9b55a477763d24bbf938"
startTime: "9:00:00"
endTime: "12:00:00"
date: "02-09-2020"
seatAvailable: 0
```

Output:



POST http://localhost:3000/book

Params | Authorization | Headers (8) | Body ● | Pre-request

none | form-data | x-www-form-urlencoded | [✓ raw]

```
{
    "username" : "piyush",
    "phone" : "7248578589",
    "date" : "02-09-2020",
    "startTiming" : "9:00:00",
    "endTiming" : "12:00:00"
}
```

Body | Cookies | Headers (6) | Test Results

Pretty | Raw | Preview | Visualize | HTML

```
Housefull !! Try for another show
```

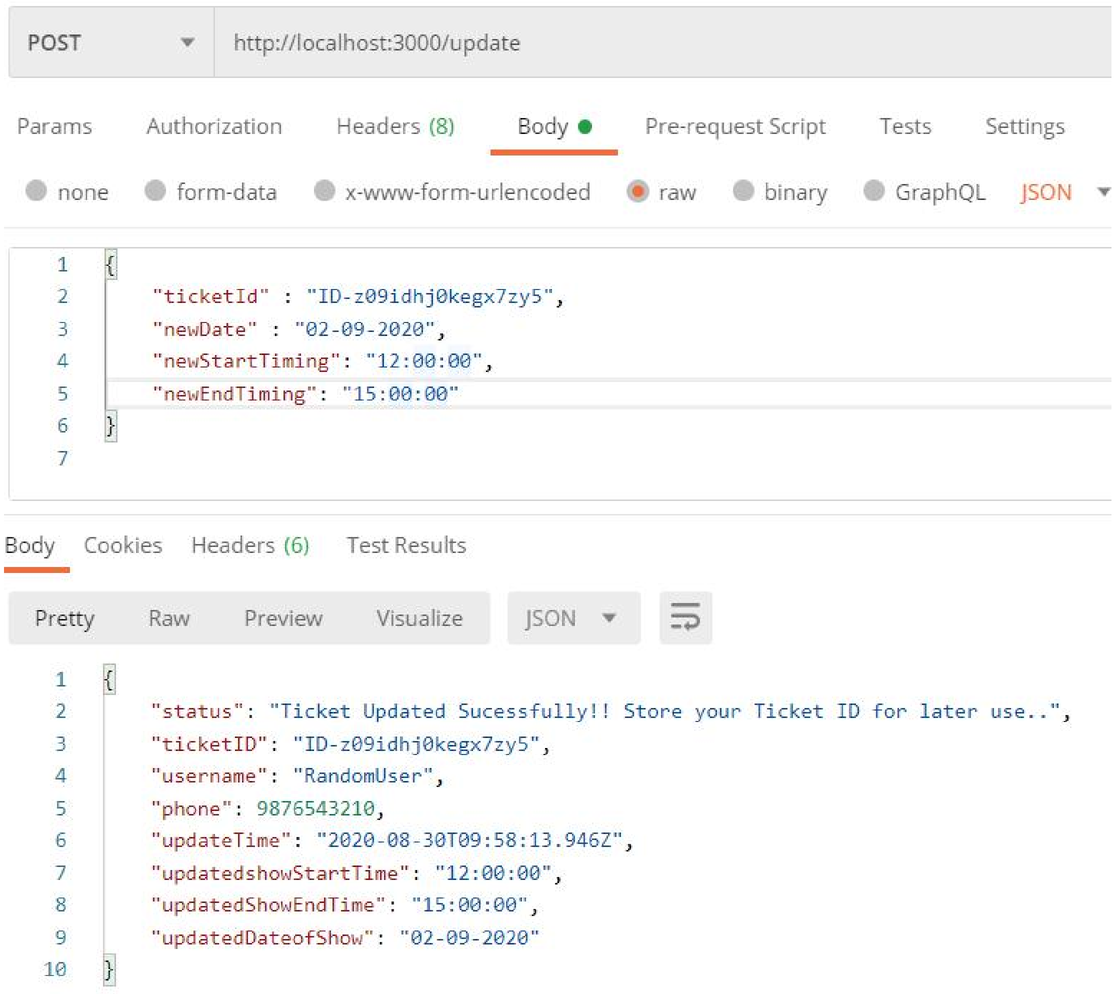
HouseFull!!!!!

#Update Ticket Timings

```
Information received by the program:
{
    "ticketId" : TicketId for which timing will beupdated,
    "newDate" : Updated Date,
    "newStartTiming": Updated start time,
    "newEndTiming": Updated End Time
}
```

Validation will done for all this information. After that, program will update the seatAvailable in previous show timings(i.e; increase it by 1).
And then check for the seat availability in new show timings.

If all OK, then it will update the timings.


POST http://localhost:3000/update

Params | Authorization | Headers (8) | Body | Pre-request Script | Tests | Settings

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

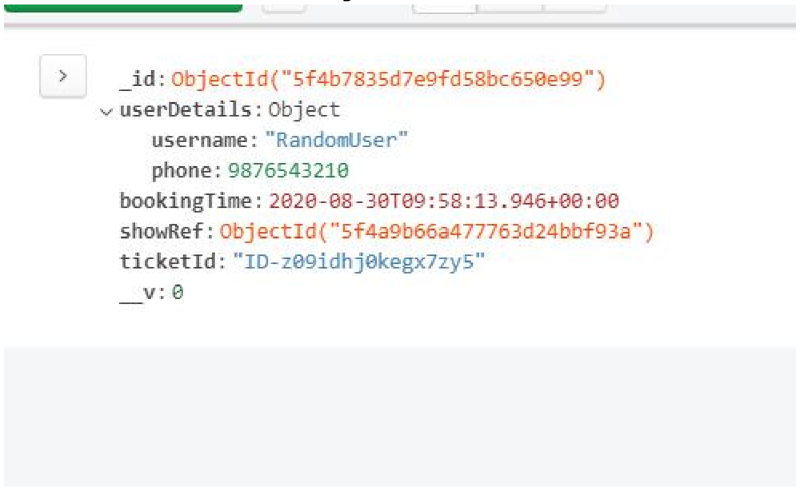
```
{
    "ticketId" : "ID-z09idhj0kegx7zy5",
    "newDate" : "02-09-2020",
    "newStartTiming": "12:00:00",
    "newEndTiming": "15:00:00"
}
```

Body | Cookies | Headers (6) | Test Results

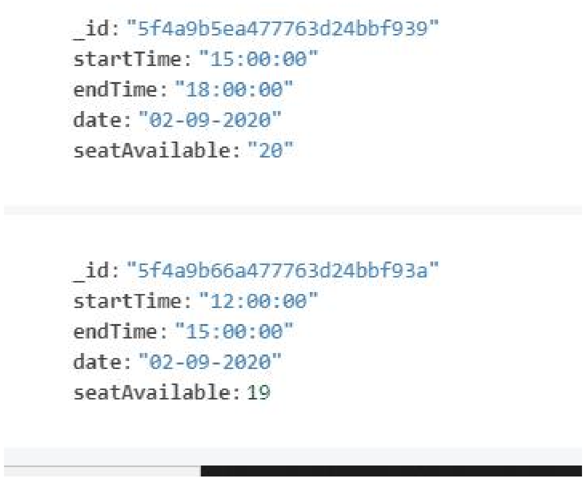
Pretty | Raw | Preview | Visualize | JSON

```
{
    "status": "Ticket Updated Sucessfully!! Store your Ticket ID for later use..",
    "ticketID": "ID-z09idhj0kegx7zy5",
    "username": "RandomUser",
    "phone": 9876543210,
    "updateTime": "2020-08-30T09:58:13.946Z",
    "updatedshowStartTime": "12:00:00",
    "updatedShowEndTime": "15:00:00",
    "updatedDateofShow": "02-09-2020"
}
```

```
Show Reference Changed:
```


```
_id: ObjectId("5f4b7835d7e9fd58bc650e99")
userDetails: Object
    username: "RandomUser"
    phone: 9876543210
bookingTime: 2020-08-30T09:58:13.946+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idhj0kegx7zy5"
__v: 0
```

```
Number of Available Seats Decreased for that show:
```



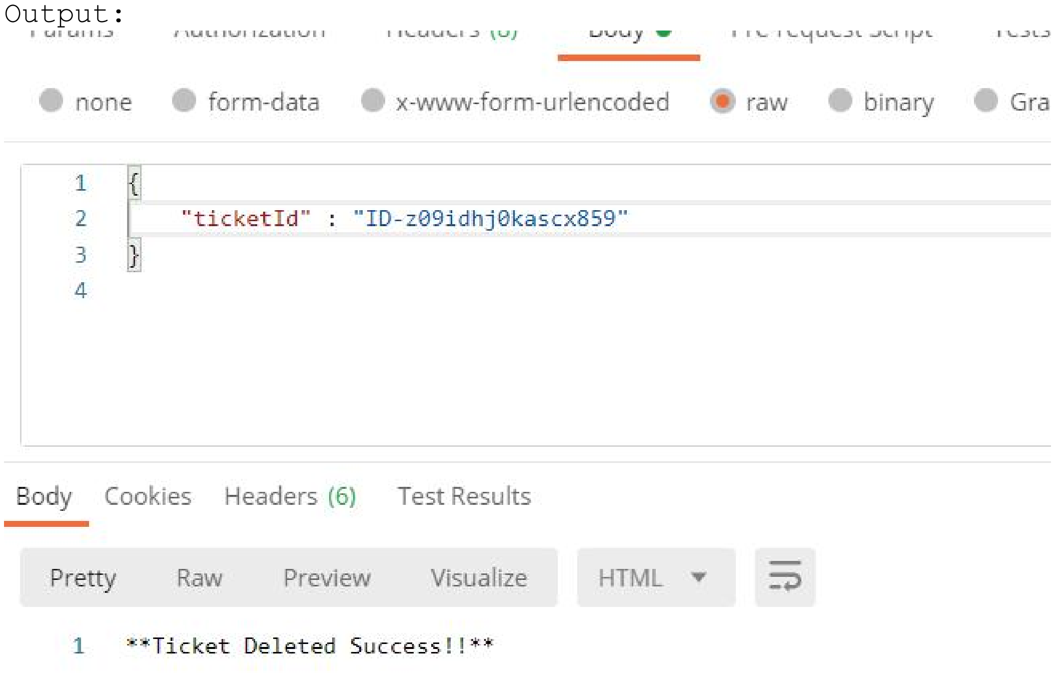
```
_id: "5f4a9b5ea477763d24bbf939"
startTime: "15:00:00"
endTime: "18:00:00"
date: "02-09-2020"
seatAvailable: "20"
```

```
_id: "5f4a9b66a477763d24bbf93a"
startTime: "12:00:00"
endTime: "15:00:00"
date: "02-09-2020"
seatAvailable: 19
```

#Deleting the ticket

Program simple remove the ticket from the database corresponding to TicketId received from client.

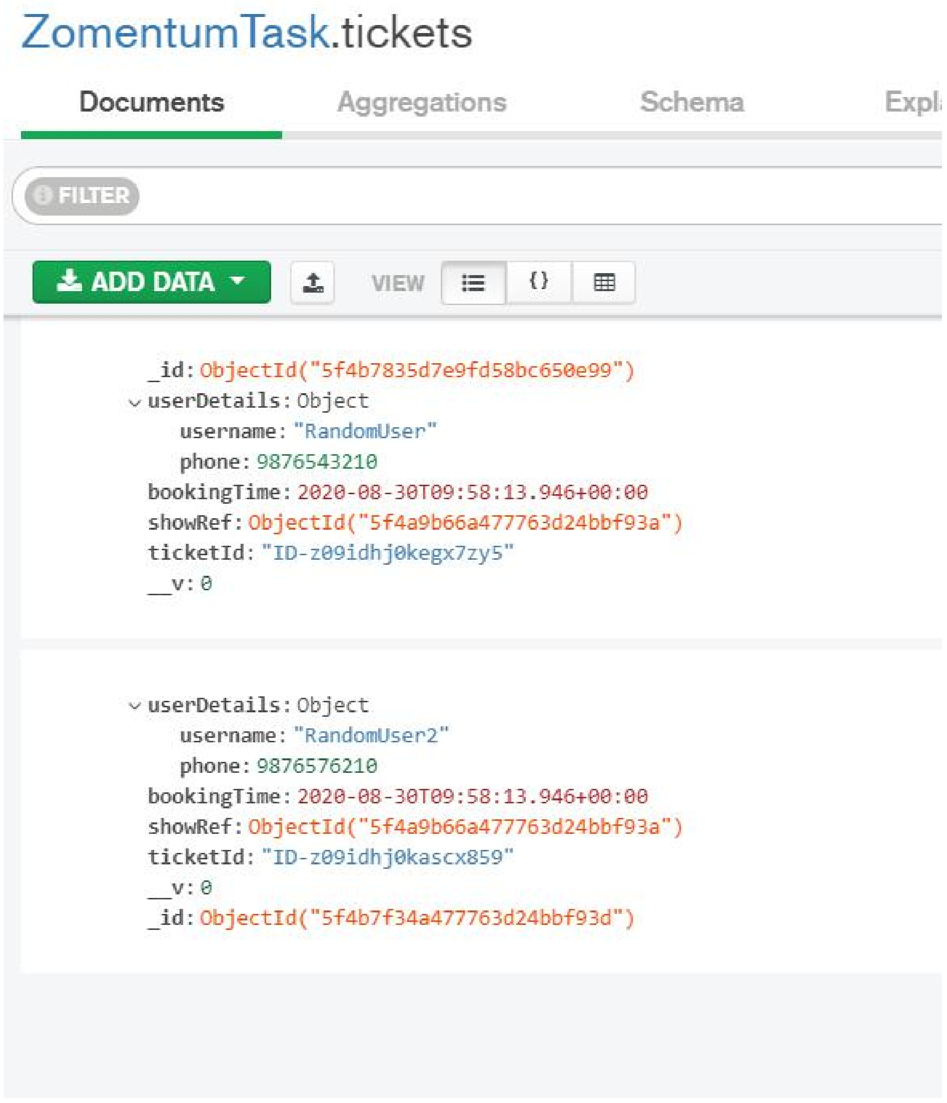
Output:



```
{
    "ticketId" : "ID-z09idhj0kascx859"
}
```

```
**Ticket Deleted Success!!**
```

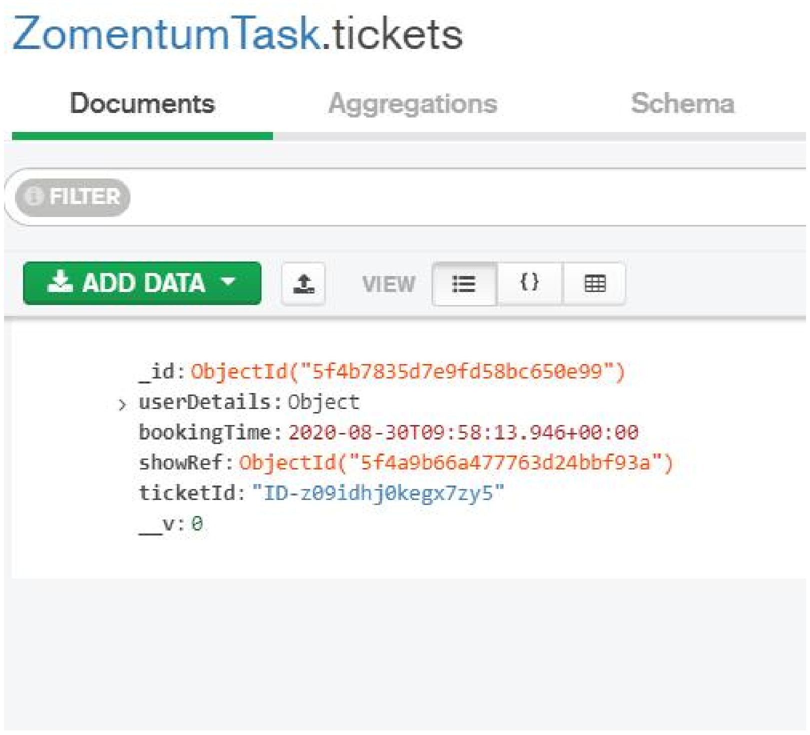
Before Deleting:



```
_id: ObjectId("5f4b7835d7e9fd58bc650e99")
userDetails: Object
   username: "RandomUser"
   phone: 9876543210
bookingTime: 2020-08-30T09:58:13.946+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idhj0kegx7zy5"
__v: 0
```

```
userDetails: Object
   username: "RandomUser2"
   phone: 9876576210
bookingTime: 2020-08-30T09:58:13.946+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idhj0kascx859"
__v: 0
_id: ObjectId("5f4b7f34a477763d24bbf93d")
```

After Deleting:



```
_id: ObjectId("5f4b7835d7e9fd58bc650e99")
> userDetails: Object
bookingTime: 2020-08-30T09:58:13.946+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idhj0kegx7zy5"
__v: 0
```

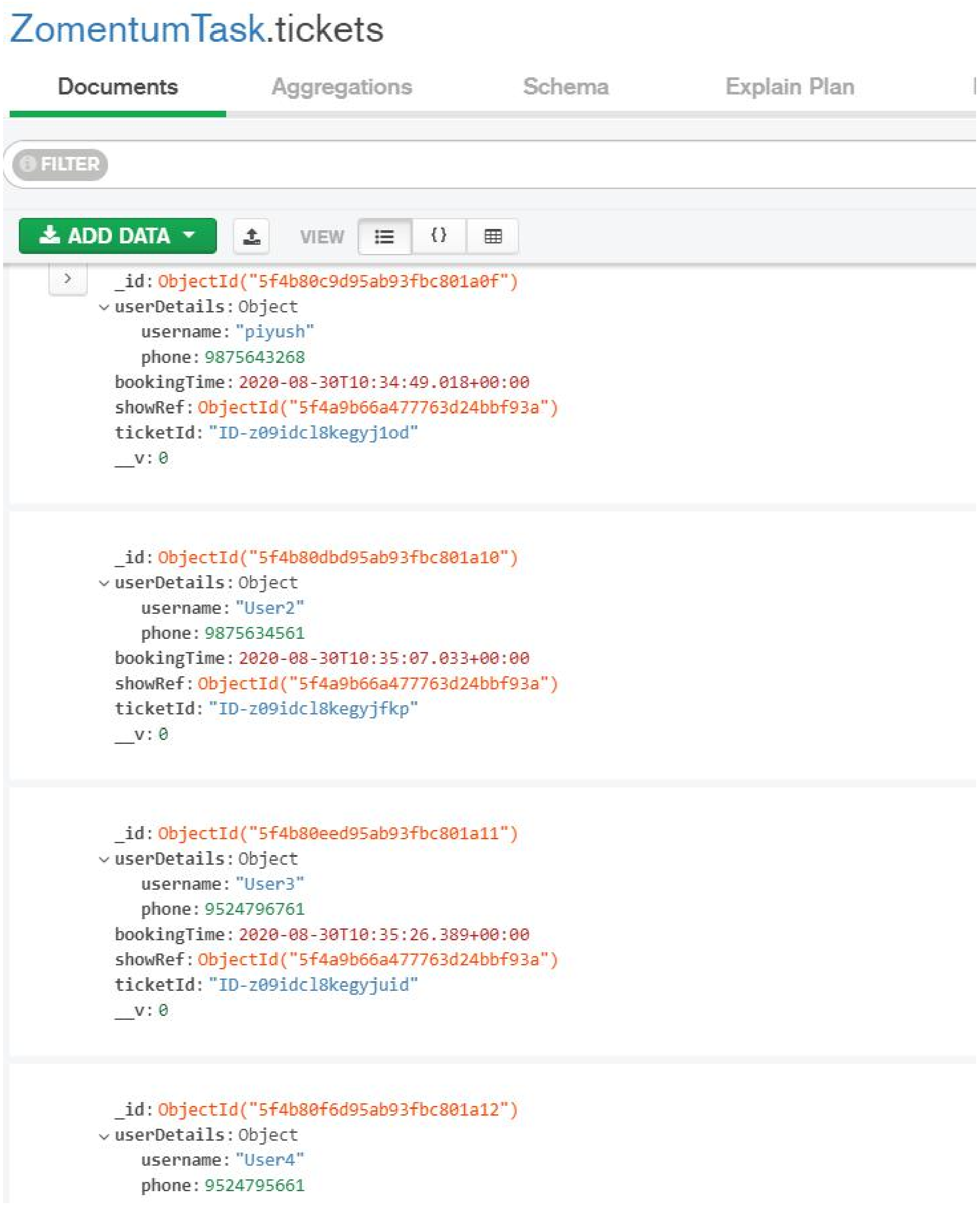
#View the tickets for particular timings

```
Information received from client Side will be:
{
    "date" : "02-09-2020",
    "startTiming" : "12:00:00",
    "endTiming" :  "15:00:00"
}
```

Values are there for demo purpose only.

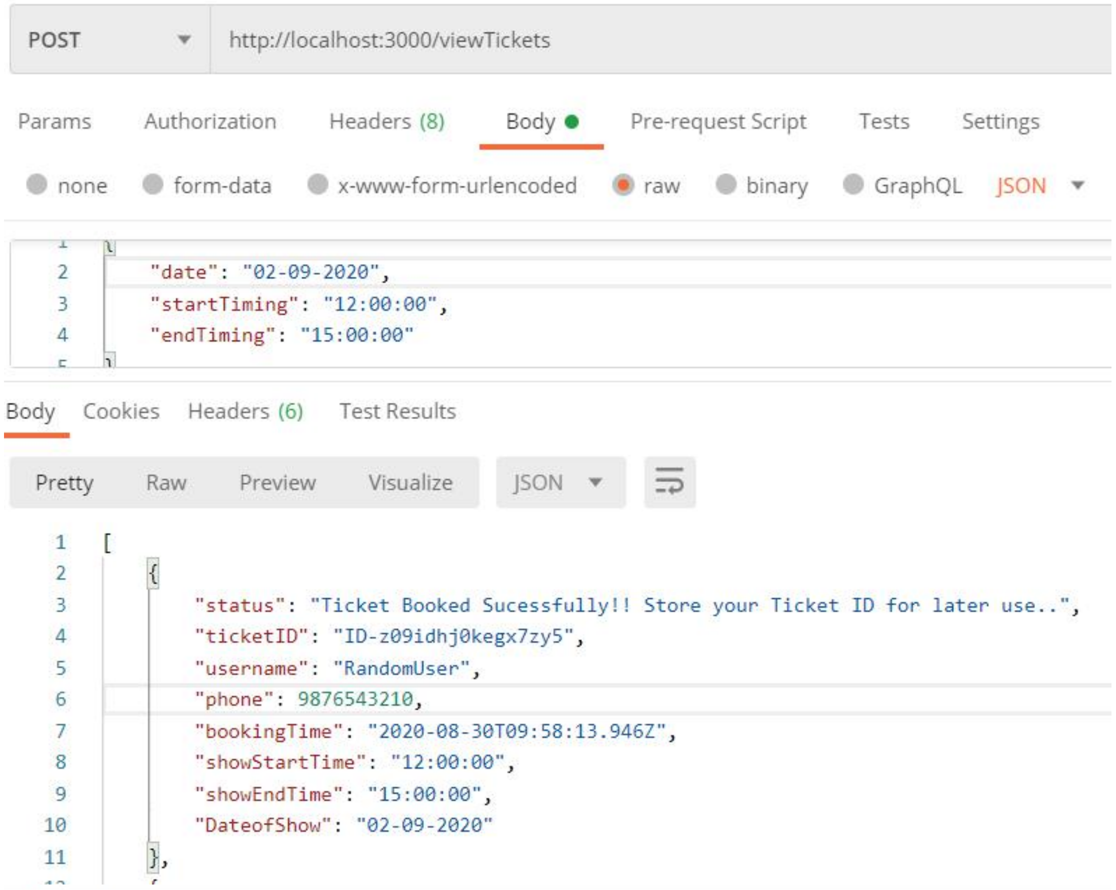
Validation of timing will processed, if all OK,
program will fetch all the ricket details from the database for that particular timing and return to client side.

Entries in Database:



```
_id: ObjectId("5f4b80c9d95ab93fbc801a0f")
userDetails: Object
    username: "piyush"
    phone: 9875643268
bookingTime: 2020-08-30T10:34:49.018+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idcl8kegyj1od"
__v: 0

_id: ObjectId("5f4b80dbd95ab93fbc801a10")
userDetails: Object
    username: "User2"
    phone: 9875634561
bookingTime: 2020-08-30T10:35:07.033+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idcl8kegyjfkp"
__v: 0

_id: ObjectId("5f4b80eed95ab93fbc801a11")
userDetails: Object
    username: "User3"
    phone: 9524796761
bookingTime: 2020-08-30T10:35:26.389+00:00
showRef: ObjectId("5f4a9b66a477763d24bbf93a")
ticketId: "ID-z09idcl8kegyjuid"
__v: 0

_id: ObjectId("5f4b80f6d95ab93fbc801a12")
userDetails: Object
    username: "User4"
    phone: 9524795661
```

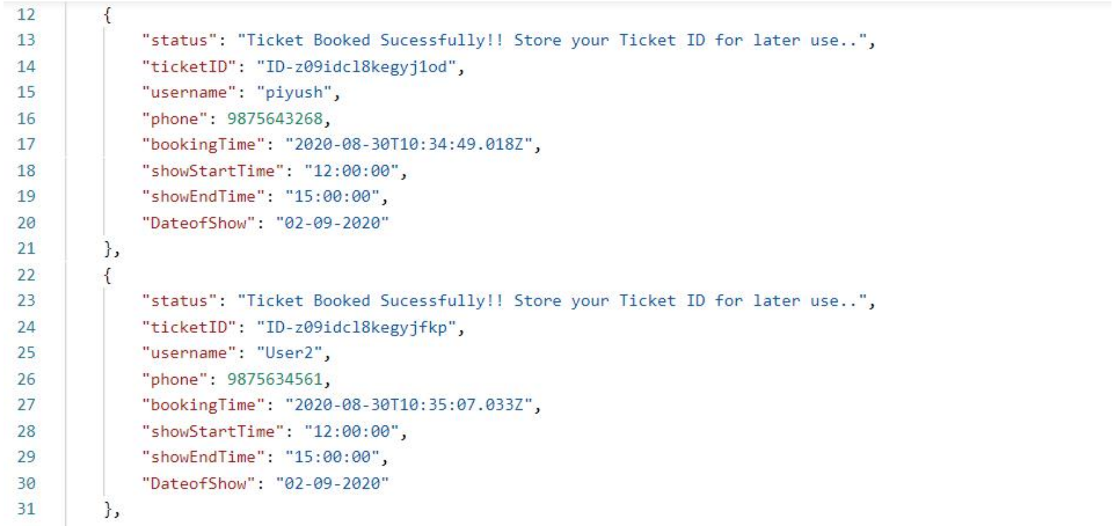
Response:



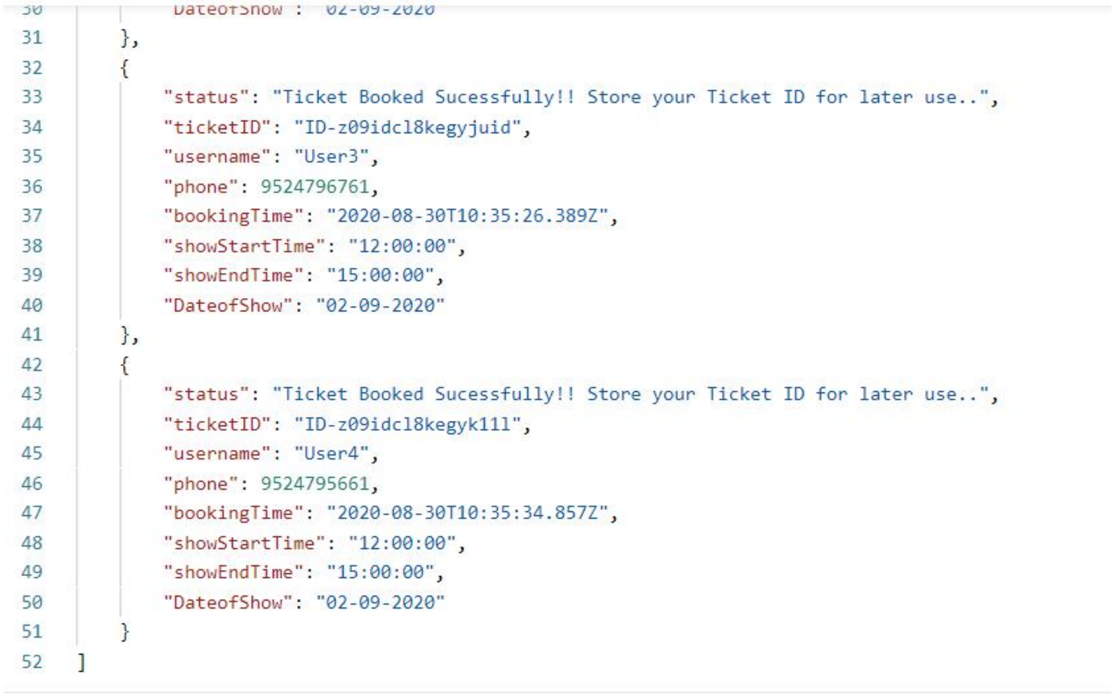
http://localhost:3000/viewTickets

```
{
    "date": "02-09-2020",
    "startTiming": "12:00:00",
    "endTiming": "15:00:00"
}
```

```
[
    {
        "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
        "ticketID": "ID-z09idhj0kegx7zy5",
        "username": "RandomUser",
        "phone": 9876543210,
        "bookingTime": "2020-08-30T09:58:13.946Z",
        "showStartTime": "12:00:00",
        "showEndTime": "15:00:00",
        "DateofShow": "02-09-2020"
    },
```



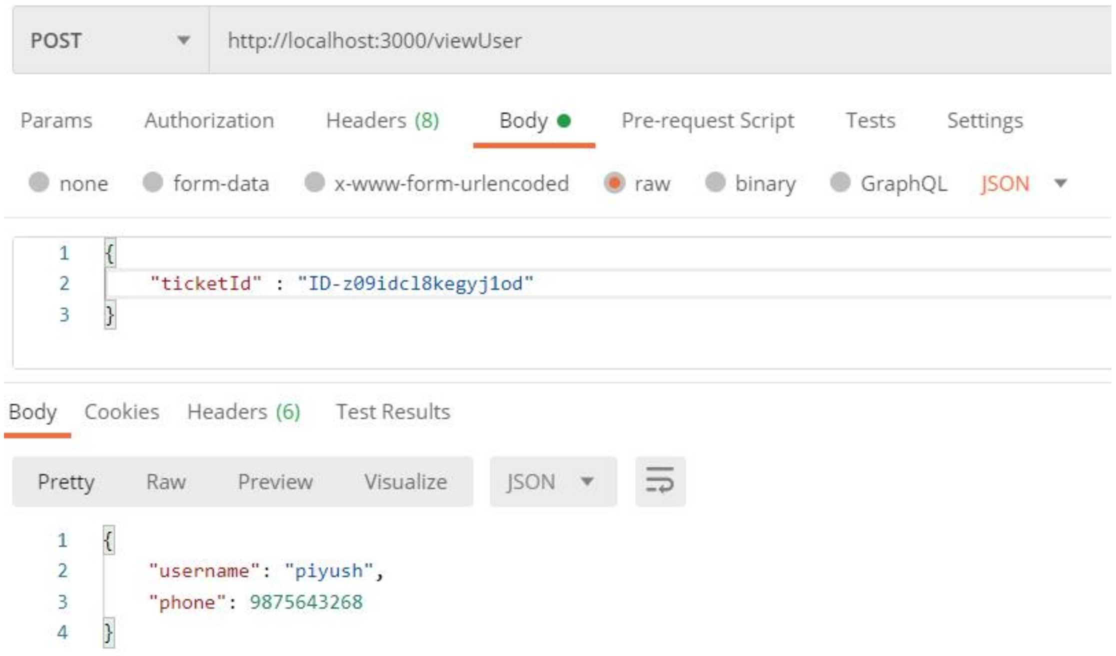
```
    {
        "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
        "ticketID": "ID-z09idcl8kegyj1od",
        "username": "piyush",
        "phone": 9875643268,
        "bookingTime": "2020-08-30T10:34:49.018Z",
        "showStartTime": "12:00:00",
        "showEndTime": "15:00:00",
        "DateofShow": "02-09-2020"
    },
    {
        "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
        "ticketID": "ID-z09idcl8kegyjfkp",
        "username": "User2",
        "phone": 9875634561,
        "bookingTime": "2020-08-30T10:35:07.033Z",
        "showStartTime": "12:00:00",
        "showEndTime": "15:00:00",
        "DateofShow": "02-09-2020"
    },
```



```
            "DateofShow": "02-09-2020"
        },
        {
            "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
            "ticketID": "ID-z09idcl8kegyjuid",
            "username": "User3",
            "phone": 9524796761,
            "bookingTime": "2020-08-30T10:35:26.389Z",
            "showStartTime": "12:00:00",
            "showEndTime": "15:00:00",
            "DateofShow": "02-09-2020"
        },
        {
            "status": "Ticket Booked Sucessfully!! Store your Ticket ID for later use..",
            "ticketID": "ID-z09idcl8kegyk11l",
            "username": "User4",
            "phone": 9524795661,
            "bookingTime": "2020-08-30T10:35:34.857Z",
            "showStartTime": "12:00:00",
            "showEndTime": "15:00:00",
            "DateofShow": "02-09-2020"
        }
]
```

#View the User by using TicketId

Ticket Id will be received from the client side and thenoutput will be:



POST http://localhost:3000/viewUser

```
{
    "ticketId" : "ID-z09idcl8kegyj1od"
}
```

```
{
    "username": "piyush",
    "phone": 9875643268
}
```