

Ex. No. 3	Classes and Objects
Date of Exercise	15-12-2017

Aim:

Develop a Menu driven java application to demonstrate the Movie Ticket Booking operations using classes and objects, array of objects as per the following.

- Create a class called **"Movie"** with attributes such as movieId, movieName, theatreName, noOfTickets, ticketCost and add the necessary constructor, setter/getter methods.
- Perform the following ticket booking operations with Menu driven options.
 - Add Movie Details.
 - Search Movie details for given movieId.
 - Book Ticket and display the ticket details.
 - Search movieName for given theatreName.

Algorithm:

- 1) Start.
- 2) Create a class called Movie with attributes such as movieId, movieName, theatreName, noOfTickets, ticketCost and add the necessary constructor, setter/getter methods.
- 3) Inside the main function, display the choices and initialize a switch case.
- 4) According to the cases, the program should be made.
- 5) For case 1, get the input from the user and add the details.
- 6) For case 2, Search the movie details for given movie id i.e., get the movie id from the user and display the details.
- 7) For case 3, Show the number of available tickets and display the ticket details after booking it.
- 8) For case 4, Search movie name for given theatre name i.e., Get theatre name from the user and display the movie name.
- 9) For case 5, exit from the program.
- 10) End.

Source Code:

```
package exp3;

import java. util.*;

class Movie

{

    int movieId, noOfTickets, ticketCost;

    String movieName, theatreName;


    public Movie(int movieId, String movie_name, String theatre_name, int no_tickets, int t_cost)

    {

        this.movieId=movieId;

        this.movieName = movie_name;

        this.theatreName = theatre_name;

        this.noOfTickets = no_tickets;

        this.ticketCost = t_cost;

    }

    public int getMovieId() {

        return movieId;

    }

    public int getNoOfTickets() {

        return noOfTickets;

    }


    public int getTicketCost() {

        return ticketCost;

    }

}
```

```
public String getMovieName() {  
    return movieName;  
}  
  
public String getTheatreName() {  
    return theatreName;  
}  
  
public void setMovieId(int movieId) {  
    this.movieId = movieId;  
}  
  
public void setNoOfTickets(int noOfTickets) {  
    this.noOfTickets = noOfTickets;  
}  
  
public void setTicketCost(int ticketCost) {  
    this.ticketCost = ticketCost;  
}  
  
public void setMovieName(String movieName) {  
    this.movieName = movieName;  
}  
  
public void setTheatreName(String theatreName) {  
    this.theatreName = theatreName;  
}  
}  
  
public class Exp3 {  
    public static void main(String[] args) {  
        System.out.print("Enter the number of Theatres in your locality: ");
```

```
int n;

Scanner s=new Scanner(System.in);

n=s.nextInt();

Movie m[]=new Movie[n];

for(int i=0;i<n;i++){

    m[i]=new Movie(0,"Empty","empty",0,0); //object declared}

boolean b;

b=true;

outer: while(b){

    System.out.println("\nChoices to be done.....");

    System.out.println("1. Add Movie Details.");

    System.out.println("2. Search Movie details for given MovieId.");

    System.out.println("3. Book ticket and display the ticket details.");

    System.out.println("4. Search Movie name for given Theatre name.");

    System.out.println("5. Exit");

    System.out.print("\nEnter your Choice: ");

    int ch;

    ch=s.nextInt();

    switch(ch){

        case 1:

            for(int i=0;i<n;i++)

            {

                System.out.println("\nAdd details for movie "+ (i+1) +": ");

                System.out.print("\nEnter Movie Id: ");

                int id;

                id=s.nextInt();
```

```
m[i].setMovieId(id);

System.out.print("Enter Movie name: ");

String name;

name=s.next();

m[i].setMovieName(name);

System.out.print("Enter the Theatre name: ");

String tname;

tname=s.next();

m[i].setTheatreName(tname);

System.out.print("Enter number of tickets: ");

int notickets;

notickets=s.nextInt();

m[i].setNoOfTickets(notickets);

System.out.print("Enter Ticket cost: ");

int tcost;

tcost=s.nextInt();

m[i].setTicketCost(tcost);

}

System.out.println("Successfully Added details for the movies..."); break;

case 2:

System.out.print("\nEnter MovieId for which Movie details is to be found: ");

int movid;

movid=s.nextInt();

for(int i=0;i<n;i++)

{

if(movid==(m[i].getMovieId()))
```

```
{  
    System.out.println("\nDetails of Movie having Movie Id as "+ m[i].getMovieId()+" are: ");  
    System.out.println("Movie Name: "+m[i].getMovieName());  
    System.out.println("Theatre Name: "+m[i].getTheatreName());  
    System.out.println("No. of Available tickets: "+ m[i].getNoOfTickets());  
    System.out.println("Ticket cost Rs: "+ m[i].getTicketCost());  
    continue outer;  
}  
System.out.println("\nSearching....");  
}  
System.out.println("Not found");  
break;  
  
case 3:  
    System.out.println("The list of Movies available are:");  
    for(int i=0;i<n;i++)  
    {  
        System.out.print("\nMovie "+(i+1)+" : ");  
        System.out.print(" "+m[i].getMovieName());  
    }  
    System.out.print("\nEnter the MovieName for which you want to buy tickets: ");  
    String ss;  
    ss=s.next();  
    int c=-1;  
    for(int i=0;i<n;i++)  
    {  
        if(ss.equals(m[i].getMovieName()))
```

```
{
    c=i;
}}
if(c>=0)
{
    System.out.println("\nMovie Details");
    System.out.println("Tickets available:"+m[c].getNoOfTickets());
    System.out.println("Ticket Price Rs:"+m[c].getTicketCost());
    System.out.print("\nEnter the number of tickets needed: ");
    int w;
    w=s.nextInt();
    if(m[c].getNoOfTickets()>=w)
    {
        System.out.println("*****");
        System.out.println("Generating tickets....");
        System.out.println("Booking Done ,Thank you for your time!!!!");
        int ww;
        ww=m[c].getNoOfTickets()-w;
        m[c].setNoOfTickets(ww);
        Random r=new Random();
        int ll=r.nextInt();
        System.out.println("Booking ID is: "+ll);
        System.out.println("Movie name: "+m[c].getMovieName());
        int p;
        p=m[c].getTicketCost()*w;
        System.out.println("Total Cost Rs:"+ p);
    }
}
```

Java Programming Lab

```
        System.out.println("Have Fun!!!!Enjoy Your Movie.....");

System.out.println("*****");
    }

    if(c==-1)
    {
        System.out.println("Movie not found");
    }

    break;

case 4: System.out.print("Enter Theatre name to search for Movie Name: ");

    String sss;

    sss=s.next();

    int j=-1;

    for(int i=0;i<n;i++)
    {
        if(sss.equals(m[i].getTheatreName()))
        {
            System.out.println("Theatre found!!!");

            j=i;
        }
    }

    if(j==-1)
    {
        System.out.println("Theatre not found!!!!");
    }

    if(j>=0)
    {
```


Java Programming Lab

```
        System.out.println("Movie available in "+m[j].getTheatreName()+" theatre is:");

        System.out.println("Movie Name: "+m[j].getMovieName());

        System.out.println("Movie Cost: "+m[j].getTicketCost());

        System.out.println("Movie Tickets Available: "+m[j].getNoOfTickets());

        System.out.println("*****");

    }

    break;

case 5:

    System.out.println("Bye Bye!!Thank you.....");

    b=false;

    s.close();

}}}}
```

Input & Output:

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```
Output - exp3 (run) x StartPage x Exp3.java x
Enter the number of Theatres in your locality: 2

Choices to be done.....
1. Add Movie Details.
2. Search Movie details for given MovieId.
3. Book ticket and display the ticket details.
4. Search Movie name for given Theatre name.
5. Exit

Enter your Choice: 1

Add details for movie 1:

Enter Movie Id: 100
Enter Movie name: DON
Enter the Theatre name: PLAZA
Enter number of tickets: 250
Enter Ticket cost: 1500

Add details for movie 2:

Enter Movie Id: 101
Enter Movie name: PASSION
Enter the Theatre name: FUN
Enter number of tickets: 300
Enter Ticket cost: 1000
Successfully Added details for the movies...
```

```
Output - exp3 (run) x StartPage x Exp3.java x
Enter your Choice: 2

Enter MovieId for which Movie details is to be found: 101

Searching....

Details of Movie having Movie Id as 101 are:
Movie Name: PASSION
Theatre Name: FUN
No. of Available tickets: 300
Ticket cost Rs: 1000

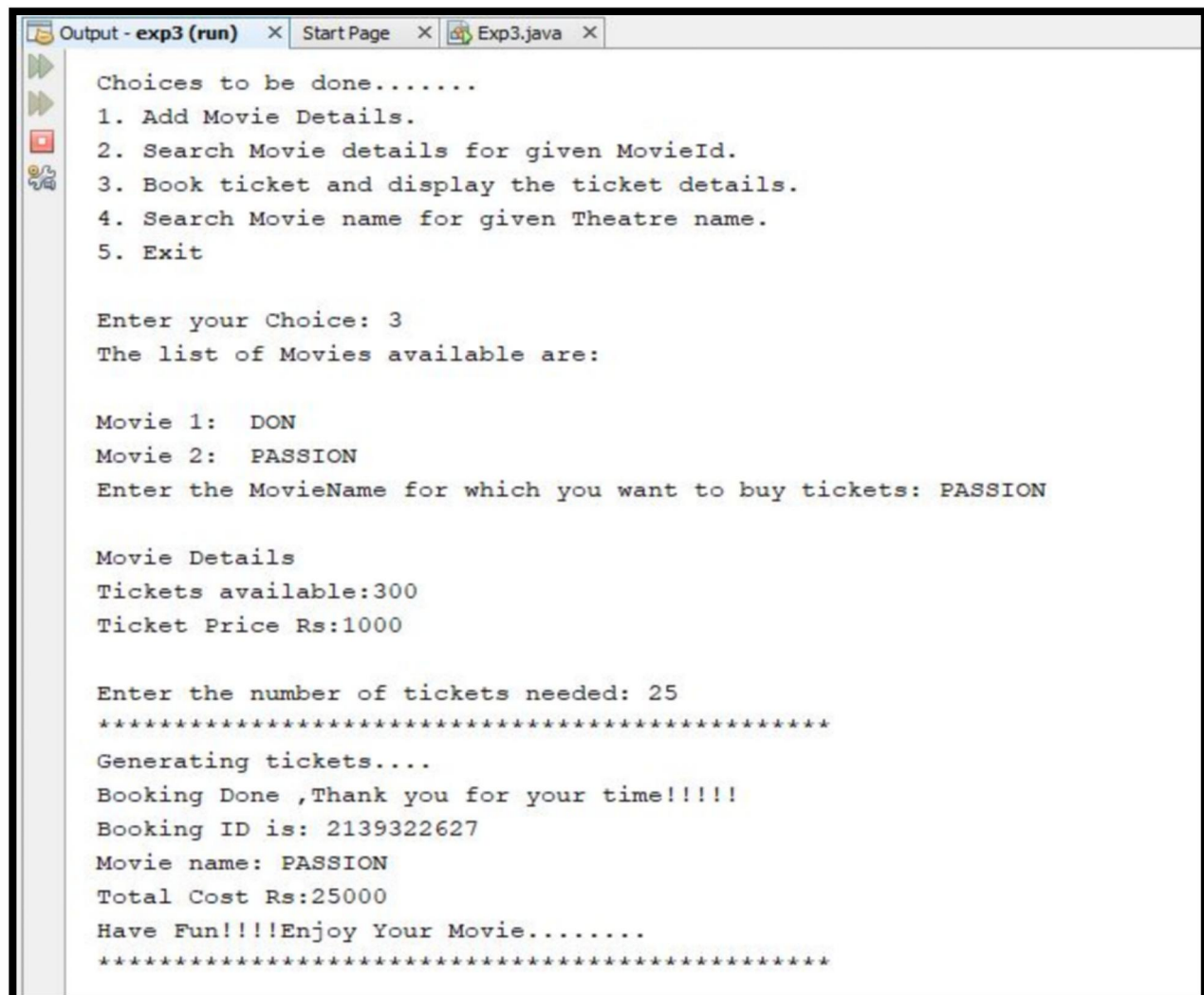
Choices to be done.....
1. Add Movie Details.
2. Search Movie details for given MovieId.
3. Book ticket and display the ticket details.
4. Search Movie name for given Theatre name.
5. Exit

Enter your Choice: 2

Enter MovieId for which Movie details is to be found: 104

Searching....

Searching....
Not found
```



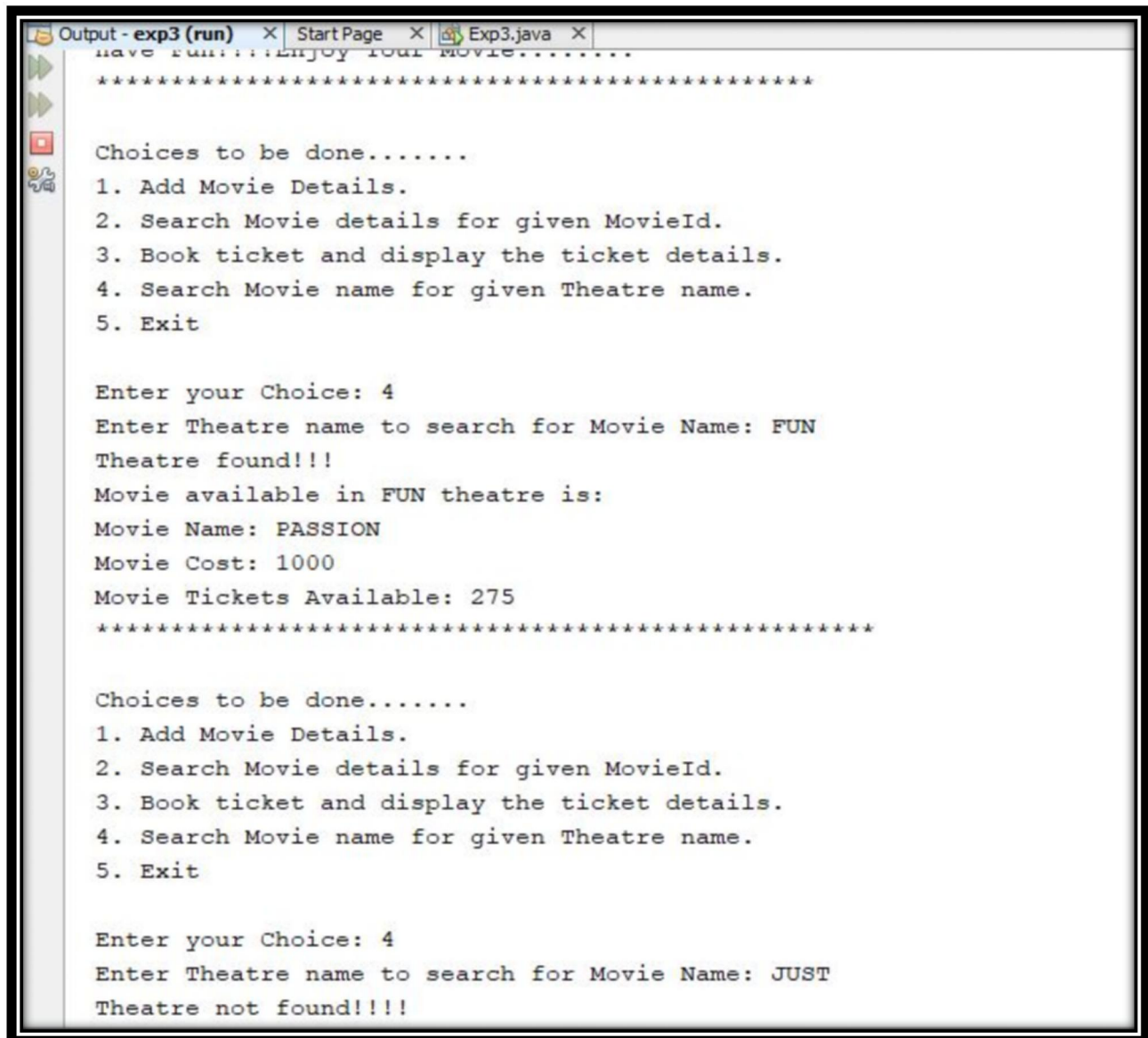
```
Output - exp3 (run) x StartPage x Exp3.java x
Choices to be done.....
1. Add Movie Details.
2. Search Movie details for given MovieId.
3. Book ticket and display the ticket details.
4. Search Movie name for given Theatre name.
5. Exit

Enter your Choice: 3
The list of Movies available are:

Movie 1: DON
Movie 2: PASSION
Enter the MovieName for which you want to buy tickets: PASSION

Movie Details
Tickets available:300
Ticket Price Rs:1000

Enter the number of tickets needed: 25
*****
Generating tickets....
Booking Done ,Thank you for your time!!!!
Booking ID is: 2139322627
Movie name: PASSION
Total Cost Rs:25000
Have Fun!!!Enjoy Your Movie.....
*****
```



```
Output - exp3 (run) X StartPage X Exp3.java X
have fun!!! Enjoy your Movie.....
*****

Choices to be done.....
1. Add Movie Details.
2. Search Movie details for given MovieId.
3. Book ticket and display the ticket details.
4. Search Movie name for given Theatre name.
5. Exit

Enter your Choice: 4
Enter Theatre name to search for Movie Name: FUN
Theatre found!!!
Movie available in FUN theatre is:
Movie Name: PASSION
Movie Cost: 1000
Movie Tickets Available: 275
*****

Choices to be done.....
1. Add Movie Details.
2. Search Movie details for given MovieId.
3. Book ticket and display the ticket details.
4. Search Movie name for given Theatre name.
5. Exit

Enter your Choice: 4
Enter Theatre name to search for Movie Name: JUST
Theatre not found!!!!
```

Video URL:

<https://www.youtube.com/watch?v=vBH1UTISauE>

Result:

The program to create a menu driven java application to demonstrate the Movie Ticket Booking operations using classes and objects, array of objects is implemented successfully, and the output is verified.