

BOOK-MY-SHOW

CPP ELECTIVE | INDIVIDUAL ASSIGNMENT-2 | ADITI GOYAL

1. CONCEPTS USED

This movie booking platform was made using the Object Oriented Programming paradigm with C++ as the programming language. Major concepts used while building the game were:

- a. **File handling** : A file containing all the user names is being stored. When a user tries to play the game, first it is checked whether the user is present in the file or not and when a new user registers, new entries are made in the file. (Further expansion possible : can add passwords)

Name of the file : users.txt

- b. **Jsoncpp library and json objects** : A json file containing the data of all the shows across all the registered cinemas was maintained. It also kept the information regarding which seat is empty and which seat is filled for each slot of the cinemas. Before a user tries to book a seat, available seats are checked and only if the seat is available, it is successfully booked. The data is manipulated easily using `Json::Value` object provided by the jsoncpp library which makes the access of a value given the key very easy.

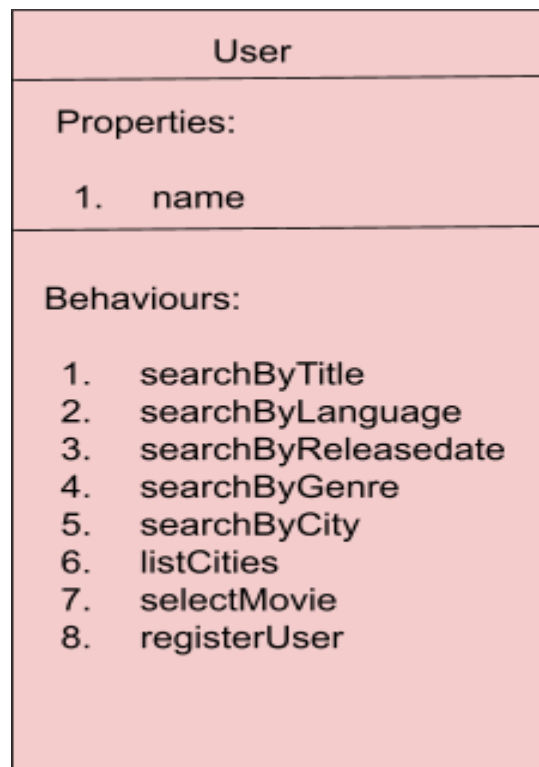
Name of the file : data.json

Source used to generate random data: <https://json-generator.com>

Code used to generate data at the given source is in the file:

data_generation.txt

2. CLASS DIAGRAM



3. CODE

The source code can be found at:

https://github.com/aditi-goyal-257/DESIIS-Educare/tree/main/Individual_Aditi/CP_P_elective/Assignment-2

4. OUTPUT SCREENS

a. The main menu

[illegible]

- ```
ENTER USER NAME
raquel
```

- ```
ENTER THE NAME WITH WHICH YOU WANT TO REGISTER
tokyo
```

- ```
<<<<<<<<<<<<<<<< USER OPTIONS >>>>>>>>>>>>>>>>
```
- PRESS 1 FOR SEARCHING MOVIE BY TITLE  
PRESS 2 FOR SEARCHING MOVIE BY LANGUAGE  
PRESS 3 FOR SEARCHING MOVIE BY GENRE  
PRESS 4 FOR SEARCHING MOVIE BY RELEASE DATE  
PRESS 5 FOR SEARCHING MOVIE BY CITY NAME  
PRESS 6 FOR LISTING CITIES  
PRESS 7 FOR SELECTING A MOVIE  
PRESS 8 FOR EXITING

- For eg, when we press 3:

ENTER GENRE  
Comedy

```
ENTER GENRE
Comedy
MOVIES ARE AS FOLLOWS:
Golmaal
Phir Hera Pheri
```

f. When user presses 6:

```
5 CITIES REGISTERED
Cawood
Libertytown
Barrelville
Brogan
Wanamie
```

g. When user presses 7:

```
ENTER MOVIE TITLE
Golmaal
<<<<<<<<< SHOW NUMBER 1 >>>>>>>>>
CITY: "Cawood"
CINEMA: "Times Placez"
HALL NUMBER: 2
DATE: "Fri Dec 17 2021 12:36:14 GMT+0530 (India Standard Time)"
SLOT: 3
<<<<<<<<< SHOW NUMBER 2 >>>>>>>>>
CITY: "Cawood"
CINEMA: "Times Placez"
HALL NUMBER: 2
DATE: "Fri Dec 17 2021 12:36:14 GMT+0530 (India Standard Time)"
SLOT: 3
<<<<<<<<< SHOW NUMBER 3 >>>>>>>>>
CITY: "Cawood"
CINEMA: "Times Placez"
HALL NUMBER: 5
DATE: "Fri Dec 17 2021 12:36:14 GMT+0530 (India Standard Time)"
SLOT: 5
<<<<<<<<< SHOW NUMBER 4 >>>>>>>>>
CITY: "Cawood"
CINEMA: "Times Placez"
HALL NUMBER: 3
DATE: "Fri Dec 17 2021 12:36:14 GMT+0530 (India Standard Time)"
SLOT: 2
<<<<<<<<< SHOW NUMBER 5 >>>>>>>>>
CITY: "Cawood"
CINEMA: "Times Placez"
HALL NUMBER: 4
DATE: "Fri Dec 17 2021 12:36:14 GMT+0530 (India Standard Time)"
SLOT: 3
<<<<<<<<< SHOW NUMBER 6 >>>>>>>>>
```

A few more slots followed by the question for which show number you want to register. Then it shows the corresponding seating arrangement with X's for seats that are already booked, otherwise a blank. Each seat has a number which can be used to book seats. It then asks to choose seat numbers and it books if the seat is available, otherwise says the seat is already booked. User can keep booking seats in this manner. A snapshot on the next page:

```

<<<<<<<< SHOW NUMBER 60 >>>>>>>>>
CITY: "Wanamie"
CINEMA: "Decatur Street"
HALL NUMBER: 5
DATE: "Fri Dec 17 2021 12:36:15 GMT+0530 (India Standard Time)"
SLOT: 4
ENTER SHOW NUMBER TO REGISTER FOR PARTICULAR SHOW
1
THE SEATING ARRANGEMENT IS AS FOLLOWS:

 _ _ _ _ _
0	1	2	3	4	5	6	7	8	9
__	__	__	__	__	__	__	__	__	__
10	11	12	13	14	15	16	17	18	19
__	__	__	__	__	__	__	__	__	__
20	21	22	23	24	25	26	27	28	29
__	__	__	__	__	__	__	__	__	__
30	31	32	33	34	35	36	37	38	39
__	__	__	__	__	__	__	__	__	__
40	41	42	43	44	45	46	47	48	49
__	__	__	__	__	__	__	__	__	__

PRESS 1 TO BOOK A SEAT
PRESS 2 IF YOU DO NOT WANT TO BOOK ANY MORE SEATS!
1
ENTER SEAT NUMBER YOU WANT TO BOOK!
2
BOOKED THE SEAT!
PRESS 1 TO BOOK A SEAT
PRESS 2 IF YOU DO NOT WANT TO BOOK ANY MORE SEATS!

```

#### Notes:

1. The code uses `system("clear")` assuming linux machine. It should be replaced by `system("cls")` for Windows.
2. Also, `jsoncpp` library is needed to compile the code.
3. Compile the `bookmyshow.cpp` as : `g++ bookmyshow.cpp -lsjsoncpp`