

ISTANBUL THEMATIC CONGRESS AND CONVERSATION CENTER

RESERVATION APPLICATION

1 PROJECT SUMMARY

This project has developed for creating an effective reservation system for a congress and conversation center. In this project the congress center has different types of halls which have different concepts and different capacity as listed below:

- **Beyazıt Hall** and **Topkapı Hall** have 2000 people capacity.
- **Bosphorus Hall** and **Golden Horn Hall** have 1000 people capacity.
- **Beşiktaş Hall** and **Üsküdar Hall** have 500 people capacity.
- **Kadıköy Hall** and **Beyoğlu Hall** have 250 people capacity.

Basically, the main functions of reservation system are:

- ✚ Selection of two event dates; one of is event start date and the other one is finish date and entering capacity of event.
- ✚ Searching for available halls with using dates and capacity informations and serving this hall for user's knowledge.
- ✚ Showing monthly periods of the halls to user
- ✚ At the final step of reservation transaction is created for getting user, event and organization informations event organizer.
- ✚ Lastly, the main function is saving event informations to respectively relative files with using hall's and event informations.

2 PROJECT CLASSES AND STRUCTURE

2.1 TIME.CLASS

Time class has developed for date transaction. In this class there are three fields are exist:

- **int** d;
- String m;
- **int** y;

and there are an enum which contains months of year and overrided toString() are exist.

2.2 HALL.CLASS

Hall java class contains only an enum which include names of hall as shown:

```
public static enum Halls {  
    BeşiktaşHall,  
    BeyazıtHall,  
    BeyoğluHall,  
    BosphorusHall,  
    GoldenHornHall,  
    KadıköyHall,  
    TopkapıHall,  
    ÜsküdarHall;  
}
```

2.3 HALLSELECTIONFRAME.CLASS

This class contains almost %70 total transaction of reservation system. The class is main gui of project as shown. At the top of the frame there are 6 JComboBoxes are filled by Month enum in Time.class and for loops. The body part has a panel which include 8 JPanel and JButtons that are represent each of them a hall.

2.3.1 Fields

- ArrayList<Time> dates = new ArrayList<>(); //stores dates which are selected by user
- ArrayList<Halls> halls = new ArrayList<>(); //stores halls which are selected by user
- int c2000 = 0, c1000 = 0, c500 = 0, c250 = 0;
//With calculation participation number which is given by user these field get their with that calculation.

- Time tstart = new Time();
- Time tfinish = new Time();

2.3.2 Methods

- private void fillPanelsAndButtons(boolean value, int hallNumber){...}

//this method fills panel and buttons which each of represent a hall, if the hall is available in the dates which are specified by user background of the panel set as green either way it set its background red and change the button's label as "not available".

- private void controlParticipantNumberForHalls() {...}

//this method is used every single time after when a user try to add a hall its event. This method control c2000, c1000, c500, c250 variables then change the color of halls panel and buttons if it is necessary.

- **private boolean** **dateIsAvaible**(File selectMonth, **int** day){...}

//In selected month, the day have an event or not it returns a boolean value.

- **private void** **examineSameMonth**(**int** sday, **int** fday, String fmonth, **int** fyear){...}

// If the two dates which are given by user have same month, year values, this method control all days with dateIsAvaibleMethod. If there is a day is full in a hall, this hall's panel and button will change with appropriate way.

- **private void** **examineDifferentMonths**(**int** sday, **int** fday, String smonth, String fmonth, **int** fyear){...}

//This method work with same principle except it control the days like that:

```

boolean startMonthAllDaysAvaible = true;
boolean finishMonthAllDaysAvaible = true;
for (int day = sday; day <= 31; day++) {
    if (dateIsAvaible(selectStartMonth, day) == false) {
        startMonthAllDaysAvaible = false;
        break;
    }
}
for (int day = 1; day <= fday; day++) {
    if (dateIsAvaible(selectFinishMonth, day) == false) {
        finishMonthAllDaysAvaible = false;
        break;
    }
}

```

- **private void** **examineDifferentYears**(**int** sday, **int** fday, String smonth, String fmonth, **int** syear, **int** fyear){...}

// The only difference between previos method and this method is; in the second for loop second years is searching.

- **private void** **resetPanelsAndButtons**() {...}

// In every search for spesific dates, this method reset the result of previous search.

- **private void** **btn_beyogluActionPerformed**(java.awt.event.ActionEvent evt) {
 if (panel_beyoglu.**getBackground**().**equals**(Color.**GREEN**) && c250 > 0) {
 halls.**add**(Halls.**values**()[2]);
 panel_beyoglu.**setBackground**(Color.**ORANGE**);
 btn_beyoglu.**setLabel**("Has Added");
 c250--;
 controlParticipantNumberForHalls();
 }
}

// Every button of halls has similar code as shown .

- ```
private void btn_searchActionPerformed(java.awt.event.ActionEvent evt) {
 resetPanelsAndButtons();
 ...
 ...
 ...
 if (fyear == syear && fmonth.equals(smonth)) {
 examineSameMonth(sday, fday, fmonth, fyear);
 } else if (fyear == syear) {
 examineDifferentMonths(sday, fday, smonth, fmonth, fyear);
 } else {
 examineDifferentYears(sday, fday, smonth, fmonth, syear, fyear);
 }
 controlParticipantNumberForHalls();
}
```

## 2.4 MONTHLYPERIODS.CLASS

### 2.4.1 Fields

- DefaultTableModel dtm;
- Object rowData[][] = new Object[31][3];
- Object columnNames[] = {"Day", "State", "Event Name"};

In this class constructor; JComboboxes and JTable are filled. Show JButton is doing 3 function. First is reading txt file that was labelled by a hall and month information which is specified by user with JCombobox. After reading that file, empty days mark as "avaible" and full day mark as "not avaible an algorithm.

## 2.5 USER.CLASS

The last class is user class. After selecting halls,dates, user filled event name, organiser name/surname, organization name and the other information. In this class constructor;

```
public User(ArrayList<Time> dates, ArrayList<Halls> halls, int participantNumber(){...}
```

With these informations, in the complete JButton there are three function occur:

- Reading relative txt file with BufferedReader into an ArrayList.
- Inserting additional informations which are entered by organiser into appropriate order in this ArrayList.
- Finally writing every index of ArrayList line by line to this text file.

### 3 PROGRAM FRAMES

ISTANBUL THEMATIC CONGRESS & CONVERSATION CENTER

Please choose your event starting date

1 January 2015

Please choose your event ending date

1 January 2015

Please enter participant number

Search

2000 People Capacity

1000 People Capacity

500 People Capacity

250 People Capacity

Topkapı Hall

Beyazıt Hall

Bosphorus Hall

GoldenHorn Hall

Beşiktaş Hall

Üsküdar Hall

Kadıköy Hall

Beyoğlu Hall

Continue to Next Step

See Hall's States in Montly Periods

ISTANBUL THEMATIC CONGRESS & CONVERSATION CENTER

Please choose your event starting date

4 February 2016

Please choose your event ending date

6 February 2016

Please enter participant number

700

Search

2000 People Capacity

1000 People Capacity

500 People Capacity

250 People Capacity

Topkapı Hall

Beyazıt Hall

not available

not available

Beşiktaş Hall

Üsküdar Hall

Kadıköy Hall

Beyoğlu Hall

Continue to Next Step

See Hall's States in Montly Periods

When the program firstly is opened by an organizer, organizer enter two dates with participant number. In these example there are two hall is available after searching transaction. "Not Available" buttons are full as shown. The other red halls capacity higher than organizer 's participant number.

ISTANBUL THEMATIC CONGRESS & CONVERSATION CENTER

Please choose your event starting date

4 March 2015

Please choose your event ending date

6 March 2015

Please enter participant number

1300

Search

2000 People Capacity

1000 People Capacity

500 People Capacity

250 People Capacity

Topkapı Hall

Beyazıt Hall

Has Added

GoldenHorn Hall

Has Added

Üsküdar Hall

Kadıköy Hall

Beyoğlu Hall

Continue to Next Step

See Hall's States in Montly Periods

ISTANBUL THEMATIC CONGRESS & CONVERSATION CENTER

ORGANIZER INFORMATION

<< BACK TO MENU

Name

Ahmet

Surname

Kaymak

Job Title

Founder/CEO

Company / Organization Name

ION Coop.

Mail

president@ion.com

EVENT INFORMATION

Event Name

ION Coop. Annual Meeting

Starting / Ending Dates

4.March.2015 - 6.March.2015

Hall Name

BosphorusHall/BeşiktaşHall

Participant Number

1300

Complete

After adding our event on reservation system. If we check Bosphorus and Beşiktaş Hall with monthly periods frame on March/2015 date, the result will be appear as shown below:

| Choose A Hall   |             |                          |
|-----------------|-------------|--------------------------|
| BeşiktaşHall    |             |                          |
| << BACK TO MENU |             |                          |
| March           | 2015        | SHOW MONTHLY PERIOD      |
| Day             | State       | Event Name               |
| 1               | Avaible     |                          |
| 2               | Avaible     |                          |
| 3               | Avaible     |                          |
| 4               | Not Avaible | ION Coop. Annual Meeting |
| 5               | Not Avaible | ION Coop. Annual Meeting |
| 6               | Not Avaible | ION Coop. Annual Meeting |
| 7               | Avaible     |                          |
| 8               | Avaible     |                          |
| 9               | Avaible     |                          |
| 10              | Avaible     |                          |
| 11              | Avaible     |                          |
| 12              | Avaible     |                          |
| 13              | Avaible     |                          |
| 14              | Avaible     |                          |
| 15              | Avaible     |                          |
| 16              | Avaible     |                          |
| 17              | Avaible     |                          |
| 18              | Avaible     |                          |
| 19              | Avaible     |                          |
| 20              | Avaible     |                          |
| 21              | Avaible     |                          |
| 22              | Avaible     |                          |
| 23              | Avaible     |                          |
| 24              | Avaible     |                          |
| 25              | Avaible     |                          |
| 26              | Avaible     |                          |
| 27              | Avaible     |                          |
| 28              | Avaible     |                          |
| 29              | Avaible     |                          |
| 30              | Avaible     |                          |
| 31              | Avaible     |                          |

| Choose A Hall   |             |                          |
|-----------------|-------------|--------------------------|
| BosphorusHall   |             |                          |
| << BACK TO MENU |             |                          |
| March           | 2015        | SHOW MONTHLY PERIOD      |
| Day             | State       | Event Name               |
| 1               | Avaible     |                          |
| 2               | Avaible     |                          |
| 3               | Avaible     |                          |
| 4               | Not Avaible | ION Coop. Annual Meeting |
| 5               | Not Avaible | ION Coop. Annual Meeting |
| 6               | Not Avaible | ION Coop. Annual Meeting |
| 7               | Avaible     |                          |
| 8               | Avaible     |                          |
| 9               | Avaible     |                          |
| 10              | Avaible     |                          |
| 11              | Avaible     |                          |
| 12              | Avaible     |                          |
| 13              | Avaible     |                          |
| 14              | Avaible     |                          |
| 15              | Avaible     |                          |
| 16              | Avaible     |                          |
| 17              | Avaible     |                          |
| 18              | Avaible     |                          |
| 19              | Avaible     |                          |
| 20              | Avaible     |                          |
| 21              | Avaible     |                          |
| 22              | Avaible     |                          |
| 23              | Avaible     |                          |
| 24              | Avaible     |                          |
| 25              | Avaible     |                          |
| 26              | Avaible     |                          |
| 27              | Avaible     |                          |
| 28              | Avaible     |                          |
| 29              | Avaible     |                          |
| 30              | Avaible     |                          |
| 31              | Avaible     |                          |

Finally, If we try to search with the same date that we show in this example, the result will be like that:


ISTANBUL THEMATIC CONGRESS & CONVERSATION CENTER


Please choose your event starting date: 4 March 2015


Please choose your event ending date: 6 March 2015

Please enter participant number: 1300

**2000 People Capacity**


  
 Topkapı Hall

  
 Beyazıt Hall


  
 not avaible

  
 GoldenHorn Hall

**1000 People Capacity**

  
 not avaible

**500 People Capacity**

  
 not avaible

  
 Üsküdar Hall

  
 Kadıköy Hall

  
 Beyoğlu Hall

**250 People Capacity**

  
 not avaible