

# **COSC1295 Advanced Programming**

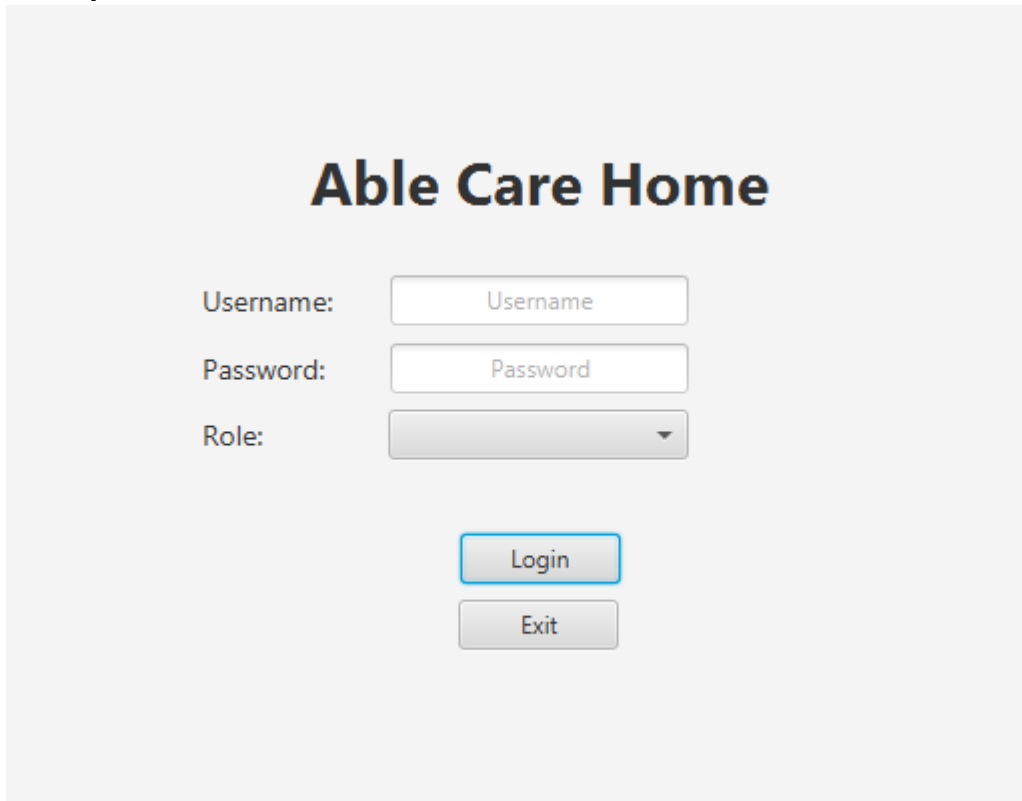
Assignment 2 Report

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## Design Outline

- Simple interface



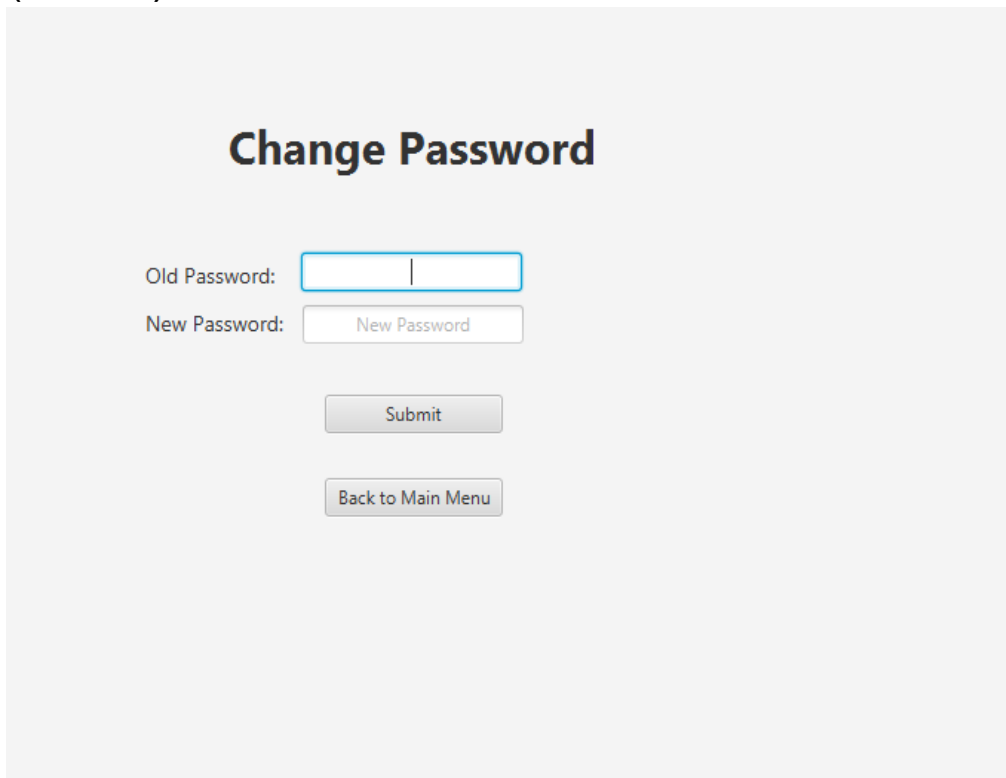
**Able Care Home**

Username:

Password:

Role:

- Manager fixed login username and password (admin)



**Change Password**

Old Password:

New Password:

- All user id start with significant alphabet (e.g. Doctor: d123, Nurse: n32, Patient: p13, Shift: s2)

## Add Staff

Username:

Password:

Role:

Shift:

- Easy to use since text box call out all the data

## Add Patient

First Name:

Last Name:

Username:

Gender:

- Click bed for details

### Bed

Patient ID:

Bed ID:

p1 move to bed w2r3b4

Ward 1

w1r1b1

Room 1

w1r2b1

Room 2

w1r2b2

Room 2

w1r3b1

Room 3

w1r3b2

Room 3

w1r3b3

Room 3

w1r3b4

Room 3

w1r4b1

Room 4

w1r4b2

Room 4

w1r4b3

Room 4

w1r4b4

Room 4

w1r5b1

Room 5

w1r5b2

Room 5

w1r5b3

Room 5

w1r5b4

Room 5

w1r6b1

Room 6

w1r6b2

Room 6

w1r6b3

Room 6

w1r6b4

Room 6

Ward 2

w2r1b1

Room 1

w2r2b1

Room 2

w2r2b2

Room 2

w2r3b1

Room 3

w2r3b2

Room 3

w2r3b3

Room 3

w2r3b4

Room 3

w2r4b1

Room 4

w2r4b2

Room 4

w2r4b3

Room 4

w2r4b4

Room 4

w2r5b1

Room 5

w2r5b2

Room 5

w2r5b3

Room 5

w2r5b4

Room 5

w2r6b1

Room 6

w2r6b2

Room 6

w2r6b3

Room 6

w2r6b4

Room 6

- Ease of verification before changing password

## Change Password

Old Password:

New Password:

- Ease of changing or adding shift

## Modify Shift

Start Time:  Username:

End Time:  Shift:

- Easy patient configuration interface

Patient Configuration	Patient Details
Patient ID: <input type="text" value=""/>	Patient ID:
<input type="button" value="Check"/>	Username:
Medicine: <input type="text" value="Medicine Name"/>	First Name:
Time: <input type="text" value="Time"/>	Last Name:
Dose: <input type="text" value="Dose"/>	Gender:
<input type="button" value="Set Medicine"/>	Medicine:
Prescription: <input type="text" value="Prescription"/>	Prescription:
<input type="button" value="Set Prescription"/>	
<input type="button" value="Return to Bed View"/>	

# Refactoring Report

- Check login detail make it simple to all verification

```
// check doctor login permission
public boolean checkDoctorLogin(String loginid) throws StaffException, RosterException{
    System.out.println(checkRosterAvailable(loginid));
    try{
        stmt = con.createStatement();
        String sql = "SELECT * FROM doctor where did = '" + loginid + "'";
        ResultSet rs = stmt.executeQuery(sql);
        if(rs.next() && checkRosterAvailable(loginid))
            return true;
        else {
            throw new RosterException("Not shift yet!");
        }
    } catch (SQLException exception) {
        System.out.println(exception.getMessage());
        exception.printStackTrace();
    }
    return false;
}
```

- Check roster for all

```
// check shift
public boolean checkRosterAvailable(String loginid) throws RosterException, StaffException{
    LocalDateTime t = LocalDateTime.now();
    DateTimeFormatter timeFormat = DateTimeFormatter.ISO_LOCAL_TIME;
    LocalDateTime formattedt = LocalDateTime.parse(t.format(timeFormat));
    LocalDateTime t1;
    LocalDateTime t2;
    String sid = null;
    if (loginid.equalsIgnoreCase("admin"))
        return true;
    else {
        try {
            stmt = con.createStatement();
            String sql = "SELECT * FROM doctor where did = '" + loginid + "'";
            ResultSet rs = stmt.executeQuery(sql);
            if (rs.next()) {
                sid = rs.getString("sid");
            }
            sql = "SELECT * FROM nurse where nid = '" + loginid + "'";
            rs = stmt.executeQuery(sql);
            if (rs.next()) {
                sid = rs.getString("sid");
            }
        }
    }
}
```

- Initializing all back end and connect to database

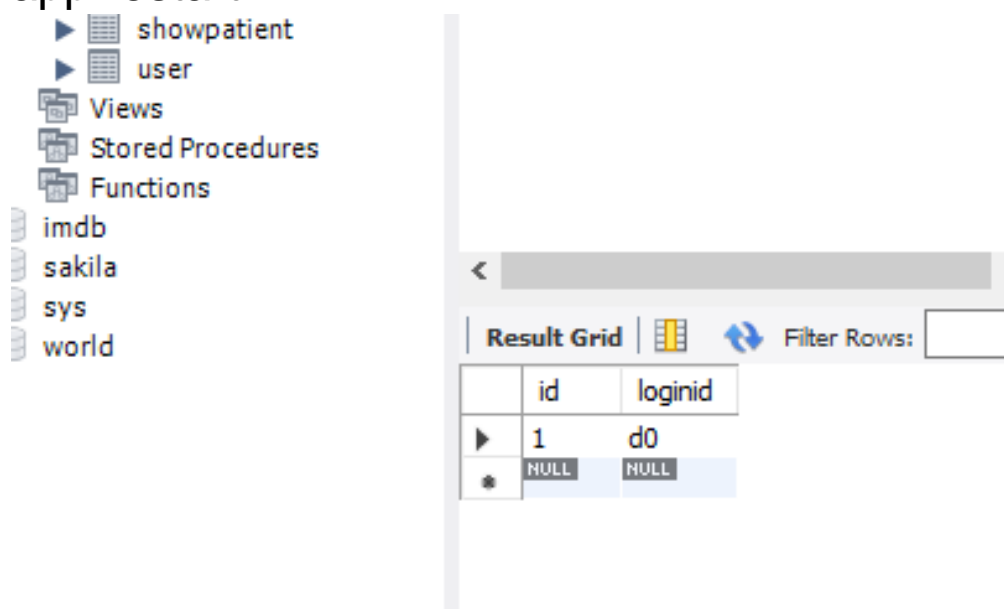
```
// initialize everything
public void initializeBackEnd() throws RosterException, StaffException{

    // initialize first manager
    setManager("admin");

    // ward, room, bed initialize
    int wardid = 1;
    for(int j = 0; j < 2; j++) {
        Ward ward = new Ward("w" + wardid);
        int roomid = 1;
        ArrayList<Room> roomList = new ArrayList<Room>();
        for(int i = 0; i < 6; i++) {
            Room room = new Room("w" + wardid+"r"+roomid);

            ArrayList<Bed> bedList = new ArrayList<Bed>();
            int bedid = 1;
            if(i == 0) {
                Bed beds = new Bed("w" + wardid+"r"+roomid+"b" + bedid);
                bedList.add(beds);
                bedCheck.put("w" + wardid+"r"+roomid+"b" + bedid,beds);
                bedid++;
            } else if(i == 1) {
                for(int bed = 0; bed < 2; bed++) {
                    Bed beds = new Bed("w" + wardid+"r"+roomid+"b" + bedid);
                    bedList.add(beds);
                    bedCheck.put("w" + wardid+"r"+roomid+"b" + bedid,beds);
                    bedid++;
                }
            }
        }
    }
}
```

- Added two new table to remember user login for remember password or username every time the app restart



The screenshot shows a database management interface. On the left, a sidebar lists databases: imdb, sakila, sys, and world. The main area displays a table named 'user' with columns 'id' and 'loginid'. The table contains one row with values '1' and 'd0'. Below the table, there are buttons for 'Result Grid' and 'Filter Rows:'. The table structure is as follows:

	id	loginid
▶	1	d0
✱	NULL	NULL

- All table id start with relevant alphabet

Result Grid			
	sid	starttime	endtime
▶	s0	00:00:00	23:59:59
	s1	08:00:00	16:00:00
	s2	14:00:00	22:00:00
*	NULL	NULL	NULL

Result Grid				
	did	username	password	sid
▶	d0	d0	d0	s0
*	NULL	NULL	NULL	NULL

Result Grid				
	nid	username	password	sid
▶	n0	n0	n0	s0
*	NULL	NULL	NULL	NULL

Result Grid					
	pid	firstname	lastname	username	gender
▶	p0	p0	p0	p0	F
	p1	p1	p1	p1	M
*	NULL	NULL	NULL	NULL	NULL

- One method of change scene use in all controller

```
}
```

```
public void changeScene(String fxml) throws IOException{
    Parent pane = FXMLLoader.load(getClass().getResource(fxml));
    stg.getScene().setRoot(pane);
}
```