

# 18CS380: Exercise 1

## COVID Resource Management System

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According to the class diagram we had submitted in Exercise 0, significant numerical data elements and methods with computation occur only in the Hospital class. But, the Hospital class is heavily dependent on multiple other classes. Since, we had to complete Exercise 1 within a day, we could not implement all the classes. So the code we have submitted below is for the User class, which does not have much computation. To demonstrate that we have understood the concept of functions and return statements, we have implemented a function that returns a JFrame object and used it to display a UI showing user details.

### Code for User Class & Driver Class

```
import javax.swing.*;

class User {
    String name;
    int age;
    int phoneNumber;

    boolean setName(String newName) {
        name = newName;
        return true;
    }

    String getName() {
        return name;
    }

    boolean setAge(int n) {
        age = n;
        return true;
    }

    int getAge() {
        return age;
    }

    boolean setPhoneNumber(int n) {
        phoneNumber = n;
        return true;
    }

    int getPhoneNumber() {
        return phoneNumber;
    }

    void viewHospitalMeta(int HospitalId) {
        System.out.println("Once Hospital Class is complete, this function will display all info about Hospital " + HospitalId);
    }

    JFrame displayUserInfo() {
        JFrame frame = new JFrame("User Information Card");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JLabel l1, l2, l3;
        l1=new JLabel("Name:      "+name);
        l1.setBounds(50,50, 300,30);
        l2=new JLabel("Age:      "+age);
        l2.setBounds(50,100, 300,30);
        l3=new JLabel("Phone Number:      "+phoneNumber);
        l3.setBounds(50,150, 300,30);
        frame.add(l1);
        frame.add(l2);
        frame.add(l3);
        frame.setSize(300,300);
        frame.setLayout(null);
        return frame;
    }
}
```

```
// Driver Class is as follows:
class userDemo {
    public static void main(String args[]) {
        User user1 = new User();

        // initialize user:
        user1.setName("testUser1");
        user1.setAge(50);
        user1.setPhoneNumber(1234567890);

        // display JFrame returned by displayUserInfo()
        user1.displayUserInfo().setVisible(true);

        // run other methods in User class:
        System.out.println("Name of Initialized User is " + user1.getName());
        System.out.println("Age of Initialized User is " + user1.getAge());
        System.out.println("Phone Number of Initialized User is " + user1.getPhoneNumber());
        user1.viewHospitalMeta(1234);
    }
}
```

## Output

```
PS C:\Users\withl\OneDrive\Desktop\College\COVID-Resource-Management-System> javac user.java
PS C:\Users\withl\OneDrive\Desktop\College\COVID-Resource-Management-System> java userDemo
Name of Initialized User is testUser1
Age of Initialized User is 50
Phone Number of Initialized User is 1234567890
Once Hospital Class is complete, this function will display all info about Hospital 1234
```

