

Final Lab Assignment

Note:

- This is a graded assignment. Only those students who are going to opt for Advanced Programming, need to submit the assignment. Grades will be counted only for those who are opting for AP.
- It is mandatory for all the students to make GUI applications for this assignment.
- Java Swing should be used for this assignment.
- **Deadline is till Thursday, 20th August, 2020, 11:59 pm.**
- **Submissions done after 11:59 pm will not at all be graded.**
- There will also be Demos (online) for this assignment for which you will get the slots from the assigned TAs.
- Naming Convention to be followed: RollNo._A0.zip

A student of IIITD did a survey to find the status of COVID-19 cases in his society. He worked for a few months and found that, out of 1000 people in his society (in different towers of his society) 20 were COVID-19 positive. So according to the detailed report he summarized the below mentioned data. A person will recover after 21 days. Now he wanted to categorize the cases.

| Patient Name | Age | Tower | Date of Reporting |
|--------------|-----|-------|-------------------|
| Flora | 6 | A | 01/04/2020 |
| Denys | 24 | B | 01/04/2020 |
| Jim | 42 | C | 18/05/2020 |
| Hazel | 87 | D | 23/06/2020 |
| Caery | 72 | A | 01/06/2020 |
| David | 7 | B | 14/06/2020 |
| Kevim | 37 | D | 05/06/2020 |
| Tom | 67 | D | 20/06/2020 |
| Bob | 74 | A | 04/07/2020 |
| Rachel | 48 | C | 24/07/2020 |
| Thomas | 21 | C | 11/06/2020 |

| | | | |
|----------|----|---|------------|
| Mary | 17 | D | 21/06/2020 |
| Smith | 89 | A | 07/08/2020 |
| Pearson | 47 | B | 04/06/2020 |
| Anderson | 62 | B | 27/07/2020 |
| Johnson | 10 | D | 01/08/2020 |
| Robertz | 50 | A | 09/08/2020 |
| Julie | 86 | B | 02/05/2020 |
| Edith | 42 | D | 07/06/2020 |
| John | 95 | D | 01/06/2020 |

Problem:

Make an interactive Java GUI application that finds and displays the **total number of active cases on a particular date and number of recovered cases on a particular date** in each category (tower) along with the **patient details with their recovery dates**.

All the information of the patients must be provided in the class named as Patient. You can make use of appropriate OOP concepts wherever possible, to enhance your code.

Input:

The program prompts the user for the Tower and the reporting date as input. For the tower category, use a Checkbox.

Constraint- All the input dates must lie within these 5 months(April 2020 - August 2020) only.

Output:

The application displays: The number of active cases, number of recovered cases on a particular date(date taken as input) from each category(tower). It should also display all patient details (either Active or Recovered) along with their recovery dates.

Use appropriate labels wherever required.