Institute of Software Engineering

Graduate Diploma in Software Engineering

Programming Fundamentals – Assignment 08

Answer all the questions and submit your attempt on or before the given date.

COVID-19 has been sweeping the globe since the end of 2019. Sri Lanka has also felt the effects of it. As a result, Sri Lanka's Ministry of Health has chosen to establish a system to manage the details of the infected people.

Each day they've decided to gather a certain number of people who are suffering from the covid for a month. Hence, as a software developer, you have been assigned to develop this system using your knowledge of programming fundamentals.

1. Declare a suitable array for this system.

The following table contains information of the infected people on the first ten days of January.

Day	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Count	13	10	25	20	27	16	18	22	30	35

2. Write a Java method to store the above data in the array. **(Use Scanner for data input)**

3. Write a Java method to print the information for the first ten days of January.

- Use those arrays for below requirements
    - int days_per_month [] = {31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31};
    - String [] months = {"Jan", "Feb", "Mar", "Apr", "May", "Jun", "Jul", "Aug", "Sep", "Oct", "Nov", "Dec"};

4. Write a java method to insert **Random** inputs for every month's daily patient count. (You should consider the number of days per month)

5. Write a java method to print every month's daily patient count.

6. Update 28th of February patient information.

7. Write a Java method to get the total of patient counts for the given month.

8. Write a Java method to get the total of patients who were detected in months which has 31 days.

9. Write a Java method to get the total number of patients in the year 2019.

10. Write a Java method to get the day that the maximum number of patients were detected in a given month.

11. Write a Java method to get the day that the minimum number of patients were detected in a given month.

12. Write a Java method to find the days that has the same patient count in a given month.

13. Create a Java method to determine the month with the most patients were detected.

14. Create a Java method to determine the month with the least number of patients were detected

15. Write a Java method to print days that patients count is over 150 in a given month.

16. Write a Java method to return patient count for given month and day by the user.

17. Perform a Java method to get the average patient count for a given month.

18. Write a Java method to print patient count in every month for the given day by the user.

19. Write a Java method to return the day and the month where the maximum patient count was detected in the year 2019.

20. Patients who were detected in February will receive a vaccine, according to the Ministry of Health. A vaccination cost RS: 150/=. Determine how much will it cost for MOH for the vaccination.

21. Write a Java method to swap patient count details from August to February.

22. Write a Java method to display patient count per day for a specific month in the ascending order.