Assignment 3 - Python Programming

Due: 27 – May – 2022, 11:55 PM

Important Notes:

- This assignment is an individual submission.
- Total Marks of 50 Marks with duration of 2 weeks.
- All script submissions should be done as per instructions.
- Inputs/output should fit the criteria mentioned in respective question.
- All other conditions are open to your interpretations.
- Evaluation will be conducted based on a fixed grading rubric (syntax, logic, input and output) and the marks are divided as per prescribed weightage in respective questions.
- For queries, reach out to TAs via Moodle

Question 1 (15 Marks)
Using loops, create a python program to print below on screen

```
********
 ******
  ****
   **
   **
  ****
 ******
********
```

In the output
Ask the user to input length of stars between (even number between 8 and 20, both included). Based on the input, generate the design as shown in the figure.

Question 2 (20 Marks)
Write a program to create a repository of Students' Name, roll number and marks (use appropriate data structure).

Example
Name:Abhinav
Roll-Number:1000201
Maths:46, CSE:70, Science:90

You will need to
1. Take user input for number of students (at least 10 student's data)
2. Build the data structure by taking input from user
3. Display the list of users and their roll number on screen
4. Ask the user to input name/or roll number based on display.
5. Based on user input, display Name of student, Marks of student, his/her mean,median and rank (Rank is calculated based on total marks)

Question 3 (15 Marks)
Write a Python program that takes 10 words(strings) from user and choice from "ascending/ descending"

Based on the choice, display the strings in that order.

In the same question, ask the user to add another string. Update and display the order with new string and end the program.

Submission Note: Create a folder with your roll number and add three Question<number>.py file to it. Please submit the zipped folder on or before the due date.