Lab 4: Python Repetition Statements

Objective(s)

- Design simple applications having iterative nature.

Tool(s)/Software

- Pycharm

  or
- IDLE (Python 3.10 or above)

  or
- https://www.online-python.com/

Description

- Write python programs that solve the following problems:

Tasks/Assignments(s)

Q1:
Write a Python program to print even numbers up to n.
For example: 2 + 4 + 6 + 8 + ….+n

Q2:

Write a Python program to print sum of odd numbers up to n.

Q3:

Write a Python program to print the multiplication table of given number from the user.

For example: x=5
1*5=5
2*5=10
…
10*5=50

Q4:

Write a Python program which repeatedly reads **positive** numbers until the user enters -1. Once -1 is entered, print out the total, count, and average of the numbers.

Q5:

Write a program which repeatedly reads positive numbers until the user enters -1. Once -1 is entered, print out both the maximum and minimum of the numbers.

Q6:

Write the program, to summation any numbers given by the user but do not include in the sum even numbers and display the summation when the user enter -1. (use continue and break).

Hint:-1:break, Even: continue, Odd: calculate the sum

Q7:

Write a python program that takes two numbers from the user (low and high) and calculates the sum of all **even** numbers between the low and high numbers and prints both the sum and count of these even numbers using a loop.

Q8:

Write a python program to print the numbers from 1-100, except numbers that can be

divisible by 3 or 5.

Q9:

A college has a list of test results (1 = pass, otherwise=fail) for 10 students.

Write a python code that accept a number given from the user and insert “pass” or “fail” into a list. Then, print the list with 10 results.

Example of output: ['pass', 'fail', 'fail', 'pass', 'pass', 'fail', 'fail', 'fail', 'pass', 'pass']

Q10:

A village had 2000 residents in 2015 and it increased by 3% every year. Write python program to calculate and print the number of residents from 2016 to 2020. **Note**: Use a repetition structure.

The expected output:

the number in 2016 = 2060.0

the number in 2017 = 2121.8

the number in 2018 = 2185.45

the number in 2019 = 2251.01

the number in 2020 = 2318.54

Deliverables

- Submit the files via blackboard. If blackboard is not working, send an email.
- No submissions or late submissions are penalized (from participation marks).
- Name the document Python_Lab4_StudentName_Q#
- You need to submit 10 files.