SE113 – LAB#6 2020-2021 SPRING

Aim: Understanding flow of control using loops, nested loops, break, and continue.

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1. Write a Python script that performs the following tasks **using loops:**

a. Ask the user to enter your birth year, and then print out years, starting from your birth year to current year.

SAMPLE OUTPUT (bold parts are entered by user):

```
Please enter your birth year: 1998

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007,
2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017,
2018, 2019, 2020, 2021
```

b. Calculate your age and print it to the screen exactly as shown in sample output below. You are supposed to perform it using the following way: Define an integer and assign its value to 0. From the year after your birth year to the current year, increase this value by 1 for each year. (Make sure that the final value will be equal to your age.)

SAMPLE OUTPUT:

```
I was born in 1998 and currently it is 2021.
Therefore, my age is 23.
```

2. Write a Python script that prints the following output. **You must use nested loops.**

OUTPUT:

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

3. Write a Python script that performs the following tasks:

a. Ask the user to enter numbers until a negative number is entered. Then, print the count of the prime numbers given by the user.

SAMPLE OUTPUT (bold parts are entered by user):

```
Enter a number: 3
Enter a number: 4
Enter a number: 12
Enter a number: 7
Enter a number: 23
Enter a number: 39
Enter a number: -4

Count of the prime numbers: 3
```

b. Ask the user to enter 10 integers. Then, print the sum of the positive integers given. If the user enters a negative integer, it will not be added to the result.

```
Enter an integer: 1
Enter an integer: 2
Enter an integer: 5
Enter an integer: 4
Enter an integer: -3
Enter an integer: -5
Enter an integer: 8
Enter an integer: 18
Enter an integer: -9
Enter an integer: -85

Sum of the positive integers: 38
```

TODO@HOME

Write a Python script that performs the following tasks:

a. Use a **while** loop to calculate and print the result of the following sum: 2 + 5 + 8 + … + 50

b. Perform the same task in part a, using a **for** loop this time.