Assignment-3

1. Write a Python program to count the number of occurrences of each word or character in the string entered by the user. (Count the Number of Occurrences of each character only if the single word is entered by the user).
2. Write a python script to print next date of input date. It must meet following conditions(use if-elif)
   C1:1<=month<=12
   C2:1<=day<=31
   C3:1800<=year<=2025
   E.g.:
   Input: Day - 28
   Month -02
   Year -1999
   Output: Next Date is: 1/03/1999
3. Write a Python program to create a list of tuples with the first element as the number and Second element as the square of the number.
   E.g. list = [3, 9, 10]
   Output: [(3, 9), (9, 81), (10, 100)]
4. Write a program to prompt the user for a grade between 4 and 10. If the grade is out of range print error message. If the grade is between 4 and 10 Print the grade and the performance using the following:

Letter Grade	Performance	Grade Points
A+	Outstanding	10
A	Excellent	9
B+	Very Good	8
B	Good	7
C+	Average	6
C	Below Average	5
D	Poor	4

E.g.: For Grade 9 Output is:

Your Grade is ‘A’ and Excellent Performance.

5. Write a python program to print following pattern.

```
ABCDEFGHIJK
 ABCDEFGHI
  ABCDEFG
   ABCDE
    ABC
     A
```

6. Write a python script that repeatedly ask user to enter name and SID of students (use ‘Y’ or ‘N’). Store them in a dictionary whose keys are SID’s and values are student’s name. Perform the following operations on Dictionary :
   a. Print students details stored in the dictionary.
   b. Sort dictionary using student names.
   c. Sort dictionary using SID.
   d. Search a student details with SID and print name of that student.
7. Write a python program to print Fibonacci sequence also print average of the resultant Fibonacci series.
8. Given the sets below, write python statement to:
   Set1= {1, 2, 3, 4, 5}
   Set2= {2, 4, 6, 8}
   Set3= {1, 5, 9, 13, 17}
   a. Create a new set of all elements that are in Set1 and Set2 but not both.
   b. Create a new set of all elements that are in only one of the three sets Set1, Set2 and Set3.
   c. Create a new set of elements that are exactly two of the sets Set1, Set2 and Set3.
   d. Create a new set of all integers in the range 1 to 10 that are not in Set1.
   e. Create a new set of all integers in the range 1 to 10 that are not in Set1, Set2 and Set3.