

## Python Programming Lab (KCS453) 2

1. Write a short note on installation of Python in windows.
2. To write a python program that takes in command line arguments as input and print the number of arguments.
2. To write a python program to perform Matrix Multiplication.
3. To write a python program to compute the GCD of two numbers.
4. Write a program to print the following patterns:

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

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

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

```
A
B C
D E F
G H I J
K L M N O
```

5. Write a program to find the grade of a student when grades are allocated as given in the table below.

### Percentage of Marks Grade

Above 90% -A  
80% to 90%- B  
70% to 80% -C  
60% to 70% -D  
Below 60% -E

Percentage of the marks obtained by the student is input to the program.

6. Write a Python program to convert temperature in degree Celsius to degree Fahrenheit. If water boils at 100 degree C and freezes as 0 degree C, use the program to find out what is the boiling point and freezing point of water on the Fahrenheit scale. (Hint:  $T(^{\circ}\text{F}) = T(^{\circ}\text{C}) \times 9/5 + 32$ )
7. Write a program to enter two integers and perform all arithmetic operations on them.
8. Write a program to swap two numbers using a third variable.
9. Write a program to swap two numbers without using a third variable.
10. Write a program to repeat the string "IEC-CET" n times. Here 'n' is an integer entered by the user.
11. Write a program to find average of three numbers.
12. Write a program that takes the name and age of the user as input and displays a message whether the user is eligible to apply for a driving license or not. (the eligible age is 18 years).
13. Write a function to print the table of a given number. The number has to be entered by the user.
14. Write a program that prints minimum and maximum of five numbers entered by the user.
15. Write a program to check if the year entered by the user is a leap year or not.
16. Write a program to generate the sequence: -5, 10, -15, 20, -25..... upto n, where n is an integer input by the user.
17. Write a program to find the sum of natural numbers up to n, where n is the number input by the user.

18. Write a program to find the sum of digits of an integer number, input by the user.
19. Write a function that checks whether an input number is a palindrome or not.
20. Write a user defined function to convert a string with more than one word into title case string where string is passed as parameter.
21. Write a program to input line(s) of text from the user until enter is pressed. Count the total number of characters in the text (including white spaces), total number of alphabets, total number of digits, total number of special symbols and total number of words in the given text. (Assume that each word is separated by one space).