Functions

1. Write a Python function to find the Max of three numbers.

2. Write a Python function to multiply all the numbers in a list.

Sample List : (8, 2, 3, -1, 7)

Expected Output : -336

3. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.

Sample String : 'The quick Brow Fox'

Expected Output :

No. of Upper case characters : 3

No. of Lower case Characters : 12

4. Write a Python function that takes a list and returns a new list with unique elements of the first list.

Sample List : [1,2,3,3,3,3,4,5]

Unique List : [1, 2, 3, 4, 5]

5. Write a Python function that checks whether a passed string is palindrome or not.

Note: A palindrome is a word, phrase, or sequence that reads the same backward as forward, e.g., madam or malayalam

6. Write a Python function to check whether a string is a pangram or not.

Note : Pangrams are words or sentences containing every letter of the alphabet at least once.

For example : "The quick brown fox jumps over the lazy dog"

7. Write a Python function that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically.

Sample Items : green-red-yellow-black-white

Expected Result : black-green-red-white-yellow

Control structures

8. Write a Python program to find those numbers which are divisible by 7 and multiple of 5, between 1500 and 2700 (both included).

9. Write a Python program to guess a number between 1 to 9. Go to the editor

Note : User is prompted to enter a guess. If the user guesses wrong then the prompt appears again until the guess is correct, on successful guess, user will get a "Well guessed!" message, and the program will exit.

10. Write a Python program to construct the following pattern, using a nested for loop.

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

11. Write a Python program that prints all the numbers from 0 to 6 except 3 and 6.

Note : Use 'continue' statement.

Expected Output : 0 1 2 4 5

12. Write a Python program to get the Fibonacci series between 0 to 50.

Note : The Fibonacci Sequence is the series of numbers :

0, 1, 1, 2, 3, 5, 8, 13, 21, ...

Every next number is found by adding up the two numbers before it.

Expected Output : 1 1 2 3 5 8 13 21 34

13. Write a Python program which accepts a sequence of comma separated 4 digit binary numbers as its input and print the numbers that are divisible by 5 in a comma separated sequence.

Sample Data : 0100,0011,1010,1001,1100,1001

Expected Output : 1010

14. Write a Python program to check the validity of password input by users.

Validation :

At least 1 letter between [a-z] and 1 letter between [A-Z].

At least 1 number between [0-9]

At least 1 character from [$#@]

Minimum length 6 characters

Maximum length 16 characters

15. Write a Python program to print alphabet pattern 'A'.

Expected Output:

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

16. Write a Python program to check whether an alphabet is a vowel or consonant.

Expected Output:

Note : a,e,i,o,u are vowels

Input a letter of the alphabet: k

k is a consonant.

17. Write a Python program to convert month name toa number of days.

Expected Output:

List of months: January, February, March, April, May, June, July, August

, September, October, November, December

Input the name of Month: February

No. of days: 28/29 days

18. Write a Python program to create the multiplication table (from 1 to 10) of a number.

Expected Output:

Input a number: 6

6 x 1 = 6

6 x 2 = 12

6 x 3 = 18

6 x 4 = 24

6 x 5 = 30

6 x 6 = 36

6 x 7 = 42

6 x 8 = 48

6 x 9 = 54

6 x 10 = 60

19. Write a Python program to construct the following pattern, using a nested loop number.

Expected Output:

1

22

333

4444

55555

666666

7777777

88888888

999999999

20. Write a Python program which takes two digits m (row) and n (column) as input and generates a two-dimensional array. The element value in the i-th row and j-th column of the array should be i*j.

Note :

i = 0,1.., m-1

j = 0,1, n-1.

Test Data : Rows = 3, Columns = 4

Expected Result : [[0, 0, 0, 0], [0, 1, 2, 3], [0, 2, 4, 6]]