Security and Networking with Python (CSE 2157)

MINOR ASSIGNMENT-3: Functions and Control Structures

1. Write a Python function to find the first, second and third greatest digit in a number.
   Sample Number: 6328
   Expected Output: 8, 6, 3

2. Find the numbers between 100 and 500, which are divisible by 3 and multiples of 5 using function in Python.

3. Write a Python program a make random guess within a given range (For ex: between 10 and 20) using function.
   Note : User should specify the range and enter a guess within that range. If the user guesses wrong then the prompt appears again until the guess is correct, on successful guess, user will get a message, "Correctly guessed", and the program will exit.

4. Write a Python function to add the squares of the even numbers between 1 and 50 (both included).

5. Write a Python function that prints all the numbers from a given specified range except two user given integer.
   Input: Given range 0-10 and user given 2 integers are: 9, 10
   Expected Output : 0 1 2 3 4 5 6 7 8

6. Write a Python function to check whether an alphabet is a vowel or consonant.

7. Write a Python program to change the name of the month to a number of days.
   Input:
   The name of Month: February
   No. of days: 28/29 days

8. Consider all the integers from 1 to 50. When the integer is a multiple of 3 print "Hello" and for multiple of 5 print "Hi". When that integer is a multiple of 3 and 5, print "HelloHi". Write this program in python.
   Required Output :
   HelloHi
   1
   2
   Hello
   4
   Hi

9. Write a Python function to find the median of three user given values.

10. Enter the today's date and day. Wrte a python program to find out the date and day, after user given number of days.
    Sample:

```
Today's date is [yyyy-mm-dd] 2024-3-05
Today's Day: Tuesday
Enter how many days after: 9
```

```
The date is [yyyy-mm-dd] 2024-3-14
Day is: Thursday
```

11. Write a Python program to calculate

$$1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5}+\cdots$$

Using recursion function.

12. Write a Python program to find x^y using recursion.

13. Write a recursive Python function to get the sum of the digits of a number (nonnegative) using recursion.

14. Write a Python program to count the number of local variables used in a function.

15. When an user enter a password, Write a Python program to validate that passwords.
Note : It should contain at least one upper case letter, one lower case letter, one digit, one special character, minimum length should be 8 characters and maximum length should be 12.

16. Write a Python program square root of a number after a specific time (in millisecond).
For example:
Enter a number whose square root will be calculated: 25
Display the result after specific milliseconds:
5.0