Problem Sheet

1. Write a python program to calculate the **total number of even numbers** and **total number of odd numbers** exist **between any two given integers say number 1 and number 2**. Print the results properly.

2. Write a python program to find the sum of all digits of a given integer. Print the result.

   Eg: The given number: 513718
   Output: Sum of all digits = 5 + 1 + 3 + 7 + 1 + 8 = 25

   Hint (1): modulus operator

   Hint (2): 513718/10 = 51371
            51371 / 10 = 5137
            5137/10   = 513
             ...

3. Write a python program to add any 5 random numbers using random () between the giver range (number1 to number2). Print the sum.

   ```python
   import random
   print(random.randrange(1, 10))
   a= print(random.randrange(1, 10))
   ```

4. Write a python code to print the data type of a variable. Test your program with integer, float, string data types with examples.

(a)

```
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

6. Write an interactive python program to read the +2 marks (say for 5 subjects) from a student and print the total marks, average marks and result (PASS/FAIL).
   - Note: If a student scores less than 50 marks for any one subject, then that student fails in +2.

7. Requirements

An university is setting up a new lab at their premises. Design an algorithm and write Python code to determine the approximate cost to be spent for setting up the lab. Cost for setting the lab is sum of cost of computers, cost of furniture and labour cost. Use the following formulae for solving the problem:

Cost of computer = cost of one computer * number of computers

Cost of furniture = Number of tables * cost of one table + number of chairs * cost of one chair

Labour cost = number of hours worked * wages per hour

Budget for Lab

Input	Processing	Output
cost of one computer, number of computers, number of tables, cost of one table, number of chairs, cost of one chair, number of hours worked, wages per hour	Budget = Cost of computers + cost of furniture + labour cost Cost of computer = cost of one computer * number of computers Cost of furniture = Number of tables * cost of one table + number of chairs * cost of one chair Labour cost = number of hours worked * wages per hour	Budget for Lab

- **Make your program more interactive. Print the results legibly.**

8. Write a python program to check whether a given number is palindrome number or not.
   Hint: **Reverse the given number and check it with the original number.**
   Eg:
   Input: 12321
   Output: Given number is Palindrome.

   Input: 98764
   Output: Given number is not Palindrome.