OUTPUT 1

value of a is 5 is type of <class 'int'>

value of b is 5.5 is type of <class 'float'>

value of c is String is type of <class 'str'>

value of d is True is type of <class 'bool'>

value of e is (1,2,3) is type of <class 'tuple'>

value of f is [4,5,6] is type of <class 'list'>

value of g is {'name': 'abc', 'age': 21} is type of <class 'dict'>

value of h is {1,2,4} is type of <class 'set'>

Experiment No.: 1 Date:

Program 1

Aim Write a program to demonstrate data type in python

```
a = 5
print ("value of a is", a, "is type of", type(a))
b = 5.5
print ("value of b is", b, "is type of", type(b))
c = "String"
print ("value of c is", c, "is type of", type(c))
d = True
print ("value of d is", d, "is type of", type(d))
e = (1, 2, 3)
print ("value of e is", e, "is type of", type(e))
f = [4, 5, 6]
print ("value of f is", f, "is type of, type(f))
g = {"name": "abc", "age": 21}
print ("value of g is", g, "is type of, type(g))
h = {1, 1, 4, 2}
print ("value of h is", h, "is typ of, type(h))
```

OUTPUT 2-a

```
For first point enter the value of x and y
cordinate 3
          4
For second point enter value of x and y
cordinate 2
          2
distance between two point is 2.236
```

OUTPUT 2-b

```
python .\ program 02-b  5 6

Sum of num 1 and num 2 is 11
```


Experiment No.: 2 Date:

Program 2

Aim: Write a program to compute distance between two points taking input from user

```
import math as m
print("For first point enter values of x and y")
x1 = float(input())
y1= float(input())
print("For second point enter values of x and y")
x2 = float(input())
y2 = float(input())
res = m.sqrt((x2-x1)**2 + (y2-y1)**2)
print("distance between 2 point is", res)
```

Aim Writ a program add.py that takes 2 number as a command line argument and print its sum

```
import sys
num1 = int(sys.argv[1])
num2 = int(sys.argv[2])
print("Sum of num1 and num2 is"
    (num1 + num2))
```

OUTPUT 3-a

```
Enter a number 2

given number is a even number
```

OUTPUT 3-b

```
1/2 = 0.50
1/3 = 0.33
1/4 = 0.25
1/5 = 0.20
1/6 = 0.17
1/7 = 0.14
1/8 = 0.12
1/9 = 0.11
1/10 = 0.10
```


Experiment No. : 3 Date :

Aim : write a program for checking weather the given number is an even number or not

```
num = int (input ("Enter a number"))
if (num %. 2 == 0):
        print ("Given number is an even num")
else :
        print ("Given number is a odd number")
```

Aim : using for loop write a program that prints out decimal equivalents of 1/2, 1/3 1/4 .. 1/10

```
for i in range (2, 11):
        num = 1/i
        print (f "1/{i} = {num. 2f}")
```

OUTPUT 4-a

```
values in list are : [1, 2, 3, 4]
first element of tuple is 1
values in tuple are : (1, 2, 3)
```

OUTPUT 4-b

```
1
2
3
4
5
```

OUTPUT 4-c

```
Enter number for countdown 4
4
3
2
1
0
```


Experiment No. : 4 Date :

Program 4

Aim : Write a program to demonstrate list and tuple in python

```
list = [1, 2, 2, 3]
list.append(4)
list.remove(2)
print("values in list are: ", list)
tuple = (1, 2, 3)
print("First element of tuple is", tuple[0])
print("values of tuple are : ", tuple)
```

Aim : Write a program using for loop that loops over a sequence

```
S = (1, 2, 3, 4, 5)
for it in S:
    print(it)
```

Aim : Write a program using a while loop that asks the user for a number and print a countdown from that No

```
num = int(input("Enter number for countdown"))
while(num >=0):
    print(num)
    num -= 1
```

Output 5-a

```
Sum of all prime below two
million : 142913828922
```

Output 5-b

```
Sum of even sequence below
four million in fibonacci sequence
4613732
```


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Experiment No. : 5 Date :

Program 5

Aim : Find the sum of all primes below 2 mill

```
Sum = 0
for i in range (2, 2000001):
    isprime = True
    for j in range (2, int((i**0.5))
        if (i % j == 0):
            prime = False
            break
    if (prime):
        Sum = Sum + i
print ("Sum of all the prime below two million",
```

Aim : By considering the term in fibonacci sequence whose values do not exceed four million, WAP to find sum of even value

```
a, b = 0, 1
Sum = 0
while ( b <= 4000000):
    if (b % 2 == 0)
        Sum += b
    c = a + b
    a = b
    b = c
print ("Sum of even sequence below 4 million ", Sum)
```