

Question 1: Execution of Print function

```
In [1]: print("This is my first python program")
```

This is my first python program

Question 2: Average of two numbers

```
In [3]: a= int(input("Give the first number : "))
b= int(input("Provide the second number for average : "))
print("Average of your number is in float", (a+b)/2)
print("Average of your number is in integer", (a+b)//2)
```

Average of your number is in float 2.5

Average of your number is in integer 2

Question 3: Exploring various data types

```
In [37]: a= "iist"
b= 7
c= 9.0
d= [3, 2]
e= (2, 0)
f= {}
g= set()
print("type of a is ", type(a))
print("type of b is ", type(b))
print("type of c is ", type(c))
print("type of d is ", type(d))
print("type of e is ", type(e))
print("type of f is ", type(f))
print("type of g is ", type(g))

# sets are unordered collections & dic, list, tuple are ordered collection
f= {'Four': ['GFTI', 'State'], 2: 'IIST', 3: 'NIT', 1: 'IIT', -1: ('MIT', 'Harva')}
g= {1, 2, 'IIST', 3}
print("dic, list, tuple are ordered collection - ", f)
print("sets is unordered collections -", g)

d[0]= 22
print(" list are mutable as updated from empty :", d)
e[0]= -50
print(" tuples are immutable as not updated from empty :", e)
```

```

type of a is <class 'str'>
type of b is <class 'int'>
type of c is <class 'float'>
type of d is <class 'list'>
type of e is <class 'tuple'>
type of f is <class 'dict'>
type of g is <class 'set'>
dic, list, tuple are ordered collection - {'Four': ['GFTI', 'State'], 2: 'IIST',
3: 'NIT', 1: 'IIT', -1: ('MIT', 'Harvard') }
sets is unordered collections - {1, 2, 3, 'IIST'}
list are mutable as updated from empty : [22, 2]

```

```

-----
TypeError                                Traceback (most recent call last)
Cell In[37], line 24
     22 d[0]= 22
     23 print(" list are mutable as updated from empty :", d)
--> 24 e[0]= -50
     25 print(" tuples are immutable as not updated from empty :", e)

TypeError: 'tuple' object does not support item assignment

```

Question 4: Print Multiples of 3 from (40 to 0)

```

In [55]: counter = 40
while counter >= 0:
    if counter%3==0:
        print(counter)
    counter -= 1

```

```

39
36
33
30
27
24
21
18
15
12
9
6
3
0

```

Question 5: Display first 50 prime numbers

```

In [5]: num = 2
while num <= 50:
    num_is_prime = True
    for i in range(2, num):
        if (num % i) == 0:
            num_is_prime = False
            break;

```

```
if num_is_prime:
    print(num)
num += 1
```

2
3
5
7
11
13
17
19
23
29
31
37
41
43
47

Question 6: Guess my number game

In []: `import random`

```
def guess_my_num():
    #Generate a no. between 1 to 100
    generated_num = random.randint(1, 100)
    guess = None
    attempts = 0

    print("Welcome to my 'Guess My Number' game!")
    print("I have a picked a number between 1 and 100.")
    print("Try to guess it and Enjoy!")

    #Loop until the user guessed the correct num
    while guess != generated_num:
        #Get user guesses
        guess = int(input("Enter your guess number; "))
        attempts += 1;

        if guess < generated_num:
            print("Try to input Higher number....Try Again!")
        elif guess > generated_num:
            print("Try to input Lower number....Try Again!")
        else:
            print("Congratulations! You have to guessed the correct number : " ,
                  print("You have to take", attempts, "guesses to get it right !")

    guess_my_num()
```

Welcome to my 'Guess My Number' game!
I have a picked a number between 1 and 100.
Try to guess it and Enjoy!

Question 7: Reversing the digit

```
In [72]: digit = "12345"
print(digit)
print("Reverse the digit ", digit[::-1])
```

12345

Reverse the digit 54321

Question 8: Calculation of factorial

```
In [5]: n = int(input("Enter any no. for factorial calculation :"))
if n<0:
    print("Factorial of negative no. is not defined")
else:
    result = 1
    for i in range(1, n+1):
        result *= i
    print("Factorial of ",n , "is", result)
```

Factorial of 4 is 24

Question 9: Accept filename from user and print extension of that

```
In [9]: filename = input("Enter the filename: ")

# Split the filename by the dot character to separate the extension
file_parts = filename.split(".")

if len(file_parts) > 1:
    extension = file_parts[-1]
    print("The extension of the file is:", extension)
else:
    print("The file has no extension")
```

The extension of the file is: shp

Question 10: To display first & last colors from list

```
In [12]: color_list= ["Red", "Green", "White", "Black"]
print("First Color", color_list[0], '\n', "Last Color", color_list[-1])
```

First Color Red

Last Color Black

Question 11: input radius of circle from user and compute that area

```
In [17]: from math import pi    # Import the 'pi' constant from the 'math' module
r = float(input("Enter the radius of circle: "))
```

```
Area = pi * r ** 2
print("Area of your circle is: ", Area)
```

Area of your circle is: 34.21194399759284

Question 12: input takes user first & last name and print them in reverse order

```
In [19]: name1 = input("Input your first name: ")
name2 = input("Input your last name: ")
print("Reverse order of your name:", name2+" "+name1)
```

Reverse order of your name: Root Joe

Question 13: display the current date and time

```
In [25]: import datetime
import pytz
current_datetime = datetime.datetime.now()
print("Current date and time-", current_datetime)

print(current_datetime.strftime("%d-%m-%Y %H:%M:%S")) # Use the 'strftime' method

current_time = datetime.datetime.now(pytz.timezone('Asia/Kolkata'))
print("The current time in india is :", current_time)
```

Current date and time- 2024-08-22 00:21:04.690071

22-08-2024 00:21:04

The current time in india is : 2024-08-22 00:21:04.690071+05:30

Question 14: Calculate no. of days between two date

```
In [35]: from datetime import date
date1= date(2001, 8, 2)
date2= date(2003, 6, 21)
# print(date1)

def numofdays(date1, date2):
    if date2 > date1:
        return (date2-date1).days
    else:
        return (date1-date2).days

print(numofdays(date1, date2), "days")
```

688 days

Question 15: function called show_stars(rows), rows=5 and print 5

rows matrix in star

```
In [36]: def show_stars(rows):  
          for i in range(1, rows + 1):  
              print('*' * i)  
  
          show_stars(5)
```

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

Question 16: Get the python version that we are using

```
In [39]: import sys  
          version = sys.version  
  
          print("We are using the Python version that is:", version)
```

We are using the Python version that is: 3.12.4 | packaged by Anaconda, Inc. | (main, Jun 18 2024, 15:03:56) [MSC v.1929 64 bit (AMD64)]

```
In [45]: print(range(2,2))
```

```
range(2, 2)
```

```
In [ ]:
```