Python_Fundamentals_Part1

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1 Date: 5-02-2025

2 Python Part 1

q.1) Write a program that asks the user for their name and age, then prints a # sentence like:

[2]:
```
name = input("enter a name:")
age = int(input("enter age:"))
print("Hello", name, "you are", age, "years old!")
```

```
enter a name: Siddhesh
enter age: 23
```

```
Hello Siddhesh you are 23 years old!
```

3 q.2)Take two numbers as input from the user and print their sum, difference, product, and quotient

[4]:
```
a = int(input("enter a:"))
b = int(input("enter b:"))
print("sum of two numbers is:", a+b)
print("differene of two number:", a-b)
print("product of two number:", a*b)
print("quotient of two numbers:", a/b)
```

```
enter a: 10
enter b: 2
```

```
sum of two numbers is: 12
differene of two number: 8
product of two number: 20
quotient of two numbers: 5.0
```

4 q.3)Ask the user to enter two integers and one float. Convert them all to floats

5 and print their average.

[10]:
```
n1 = int(input("enter a n1:"))
n2 = int(input("enter a n2"))
n3 = float(input("enter a n3"))
# n1, n2 = float(n1), float(n2)
flt_avg = (n1+ n2 + n3) / 3
print("thier avg is:",flt_avg)
```

```
enter a n1: 9
enter a n2 9
enter a n3 9.5

thier avg is: 9.166666666666666
```

6 q.4)The 'user enters a string containing a number (e.g., "45"). Convert it to:

7 • an integer

8 • a float

9 • a string again

[12]:
```
s_c_num = input("enter a string con num:")
i_num = int(s_c_num)
print("an integer:", i_num, type(i_num))
f_num = float(i_num)
print("a float:", f_num, type(f_num))
s_num = str(f_num)
print("a string again:", s_num, type(s_num))
```

```
enter a string con num: 13

an integer: 13 <class 'int'>
a float: 13.0 <class 'float'>
a string again: 13.0 <class 'str'>
```

10 q.5) Evaluate and print the result of the following expression:

[15]:
```
x = 10 + 3 * 2 ** 2
print(x)
```

```
22
```

11 Q6. Write a program to swap values of two numbers entered by the user

[18]:
```
a = int(input("enter a num1:"))
b = int(input("enter a num2:"))
a , b = b, a
print("Value of a is :",a)
print("Value of b is :",b)
```

```
enter a num1: 10
enter a num2: 35

Value of a is : 35
Value of b is : 10
```

12 q.7)Ask the user for a temperature in Celsius (string input). Convert it to float ,then calculate and print temperature in Fahrenheit.

[23]:
```
c_temp = input("enter a cel_temp:")
cel_temp = float(c_temp)
fa_temp = (cel_temp * (9/5)) + 32
print("fahrenheit temp =:", fa_temp)
```

```
enter a cel_temp: 12

fahrenheit temp =: 53.6
```

13 q.8)Take the radius (r) as user input and print the area. Use the formula: Area = * r (value of = 3.14)

[24]:
```
r = int(input("enter a radi:"))
pi = 3.14
area = pi * r**2
print("area of given radius is:", area)
```

```
enter a radi: 4

area of given radius is: 50.24
```

14 q.9)Ask the user for: Principal (P), Rate (R), Time (T). Convert all to float and compute simple interest:float SI = (P∗R ∗ T)/100

[27]:
```
P = int(input("enter a principal(P):"))
R = int(input("enter a Rate(R):"))
T = int(input("enter a Time(T):"))
p, r, t = float(P), float(R), float(T)
S_I = (p * r * t)/100
print("Simple Interest is:", S_I)
```

```
enter a principal(P): 30
enter a Rate(R): 40
enter a Time(T): 21

Simple Interest is: 252.0
```

15 q.10)Take a decimal number as input (like 45.78) and output its • integer part - 45 • fractional part - .78

[29]:
```
d_num = float(input("enter a dec_num:"))
i_num = int(d_num)
print("Integral part:", i_num)
f_num = d_num-i_num
print("Fractional part:", f_num)
```

```
enter a dec_num: 21.22

Integral part: 21
Fractional part: 0.21999999999999886
```

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