python-programming-lab-1

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Python Programming - 2301CS404

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Lab-1

0.0.1 01) WAP to print “Hello World”

[1]:
```
print('Hello World')
```

```
Hello World
```

0.0.2 02) WAP to print addition of two numbers with and without using input().

[3]:
```
a,b = 10,10
print(a+b)

n1 = int(input('Enter number 1'))
n2 = int(input('Enter number 2'))
print(n1+n2)
```

```
20
```

```
Enter number 1 10
Enter number 2 10
```

```
20
```

0.0.3 03) WAP to check the type of the variable.

[2]:
```
b = True
print(type(b))
```

```
<class 'bool'>
```

0.0.4 04) WAP to calculate simple interest.

[3]:
```
p = float(input("Enter the principal amount: "))
r = float(input("Enter the rate of interest (in percentage): "))
t = float(input("Enter the time period (in years): "))

si = (p * r * t) / 100
print(f"The simple interest is: {si}")
```

```
Enter the principal amount:  1000
Enter the rate of interest (in percentage):  25
Enter the time period (in years):  65
```

```
The simple interest is: 16250.0
```

0.0.5 05) WAP to calculate area and perimeter of a circle.

[6]:
```
r = float(input("Enter Radius "))
peri = 2 * 3.14 * r
area = 3.14 * r * r

print("Perimeter is",peri)
print("Area is",area)
```

```
Enter Radius  3
```

```
Perimeter is 18.84
Area is 28.259999999999998
```

0.0.6 06) WAP to calculate area of a triangle.

[7]:
```
base = float(input("Enter base "))
height = float(input("Enter Height "))
area  = 0.5 * base * height
print("Area of Triangle is",area)
```

```
Enter base  1
Enter Height  1
```

```
Area of Triangle is 0.5
```

0.0.7 07) WAP to compute quotient and remainder.

[8]:
```
dividend = int(input("Enter the dividend: "))
divisor = int(input("Enter the divisor: "))

quotient = dividend // divisor
remainder = dividend % divisor
```

```
print("Quotient:", quotient)
print("Remainder:", remainder)
```

```
Enter the dividend:  45
Enter the divisor:  5
```

```
Quotient: 9
Remainder: 0
```

0.0.8 08) WAP to convert degree into Fahrenheit and vice versa.

[5]:
```
f = float(input("Enter temp in Fahrenheit: "))
c = (f - 32) * (5 / 9)
print(str(f) + " degrees Fahrenheit is equal to " + str(c) + " degrees Celsius.
 ↪")
```

```
Enter temp in Fahrenheit:  100
```

```
100.0 degrees Fahrenheit is equal to 37.77777777777778 degrees Celsius.
```

1 09) WAP to find the distance between two points in 2-D space.

[26]:
```
import math

x1 = float(input("Enter x1"));
y1 = float(input("Enter y1"));
x2 = float(input("Enter x2"));
y2 = float(input("Enter y2"));

distance = math.sqrt((x2 - x1)**2 + (y2 - y1)**2)

print(f"The distance between the points ({x1}, {y1}) and ({x2}, {y2}) is:␣
 ↪{distance}")
```

```
Enter x1 5
Enter y1 5
Enter x2 5
Enter y2 5
```

```
The distance between the points (5.0, 5.0) and (5.0, 5.0) is: 0.0
```

1.0.1 10) WAP to print sum of n natural numbers.

[16]:
```
n = int(input("Enter number n: "))

sum_n = (n * (n + 1)) // 2

print(f"The sum of the first {n} natural numbers is: {sum_n}")
```

```
Enter number n:  5

The sum of the first 5 natural numbers is: 15
```

1.0.2 11) WAP to print sum of square of n natural numbers.

[17]:
```
n = int(input("Enter number n: "))

sum_of_squares = (n * (n + 1) * (2 * n + 1)) // 6

print(f"The sum of squares of the first {n} natural numbers is:␣
 ↪{sum_of_squares}")
```

```
Enter number n:  55

The sum of squares of the first 55 natural numbers is: 56980
```

1.0.3 12) WAP to concate the first and last name of the student.

[21]:
```
fn = input("Enter the first name: ")
ln = input("Enter the last name: ")

full = fn + " " + ln

print(f"The full name of the student is: {full}")
```

```
Enter the first name:  rtn
Enter the last name:  \srtj

The full name of the student is: rtn \srtj
```

1.0.4 13) WAP to swap two numbers.

[22]:
```
a = float(input("Enter the first number: "))
b = float(input("Enter the second number: "))

temp = a
a = b
b = temp

print(f"After swapping: a = {a}, b = {b}")
```

```
Enter the first number:  54
Enter the second number:  56

After swapping: a = 56.0, b = 54.0
```

1.0.5 14) WAP to get the distance from user into kilometer, and convert it into meter, feet, inches and centimeter.

[24]:
```
kilometers = float(input("Enter the distance in kilometers: "))

meters = kilometers * 1000
feet = kilometers * 3280.84
inches = kilometers * 39370.1
centimeters = kilometers * 100000

print(f"{meters} meters")
print(f"{feet} feet")
print(f"{inches} inches")
print(f"{centimeters} centimeters")
```

```
Enter the distance in kilometers:  4

4000.0 meters
13123.36 feet
157480.4 inches
400000.0 centimeters
```

1.0.6 15) WAP to get day, month and year from the user and print the date in the given format: 23-11-2024.

[27]:
```
day = int(input("Enter the day: "))
month = int(input("Enter the month: "))
year = int(input("Enter the year: "))

formatted_date = f"{day:02d}-{month:02d}-{year}"

print("The date in the given format is:", formatted_date)
```

```
Enter the day:  32
Enter the month:  32
Enter the year:  32

The date in the given format is: 32-32-32
```