Python Programming - Lab - 2

March 11, 2025

Python Programming - 2301CS404

Lab - 2

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1 if..else..

1.0.1 01) WAP to check whether the given number is positive or negative.

[4]:
```
a = int(input("enter number"))
if(a>=0):
    print("positive")
else:
    print("negative")
```

```
enter number-4
negative
```

1.0.2 02) WAP to check whether the given number is odd or even.

[6]:
```
a = int(input("enter number"))
if(a%2==0):
    print("even")
else:
    print("odd")
```

```
enter number3
odd
```

1.0.3 03) WAP to find out largest number from given two numbers using simple if and ternary operator.

[10]:
```
a = int(input("enter number 1"))
b = int(input("enter number 2"))
# if(a>b):
#     print("a is greater")
# else:
#     print("b is greater")
```

```
# a>b ? print("a is greater") : print("b is greater")
print("a is greater") if a>b else print("b is greater")
```

```
enter number 15
enter number 26
b is greater
```

1.0.4 04) WAP to find out largest number from given three numbers.

[6]:
```
a = int(input("enter number 1"))
b = int(input("enter number 2"))
c = int(input("enter number 3"))

print("a is greater" if a>c else "c is greater" if a>b else "b is greater" if b␣
 ↪> c  else "c is greater")
# print("a is greater") if a>c else print("c is greater") if a>b else print("b␣
 ↪is greater") if b > c  else print("c is greater")
# print("a is greater" if a > b and a > c else "b is greater" if b > c else "c␣
 ↪is greater")
```

```
enter number 15
enter number 26
enter number 37
c is greater
```

05) WAP to check whether the given year is leap year or not. [If a year can be divisible by 4 but not divisible by 100 then it is leap year but if it is divisible by 400 then it is leap year]

[9]:
```
n = int(input("enter year"))
if(n%4==0 and n%100==0 or n%4):
    print("leap year")
```

```
enter year2024
```

1.0.5 06) WAP in python to display the name of the day according to the number given by the user.

[10]:
```
n = int(input("enter number"))
match n:
    case 1:
        print("monday")
    case 2:
        print("tuesday")
    case 3:
        print("wednesday")
    case 4:
        print("thursday")
    case 5:
```

```
        print("friday")
    case 6:
        print("saturday")
    case 7:
        print("sunday")
```

```
enter number5
friday
```

1.0.6 07) WAP to implement simple calculator which performs (add,sub,mul,div) of two no. based on user input.

[12]:
```
a = int(input("enter number 1"))
c = input("enter operator")
b = int(input("enter number 2"))

match c:
    case '+':
        print(a+b)
    case '-':
        print(a-b)
    case '*':
        print(a*b)
    case '/':
        print("b should not be 0") if b==0 else print(a/b)
```

```
enter number 15
enter operator/
enter number 20
b should not be 0
```

1.0.7 08) WAP to read marks of five subjects. Calculate percentage and print class accordingly.

Fail below 35 Pass Class between 35 to 45 Second Class between 45 to 60 First Class between 60 to 70 Distinction if more than 70

[14]:
```
totalSum = 0;
for i in range(5):
    n = float(input(f"enter marks of student {i+1}"))
    totalSum+=n
percentage = totalSum/5
if percentage<35:
    print("fail")
elif percentage>=35 and percentage<45:
    print("pass")
elif percentage>=45 and percentage<60:
    print("second")
```

```
elif percentage>=60 and percentage<70:
    print("first class")
else:
    print("distinction")
```

```
enter marks of student 150
enter marks of student 250
enter marks of student 350
enter marks of student 450
enter marks of student 550
second
```

1.0.8 09) Three sides of a triangle are entered through the keyboard, WAP to check whether the triangle is isosceles, equilateral, scalene or right-angled triangle.

[17]:
```
a = int(input("Enter side 1: "))
b = int(input("Enter side 2: "))
c = int(input("Enter side 3: "))

if a==b and b==c and a==c:
    print("Equilateral")
elif a==b or b==c or a==c:
    print("isosceles")
elif a!=b and a!=c and b!=c:
    print("scalene")
elif (a**2 + b**2 == c**2 or a**2+c**2 == b**2 or c**2+b**2 == a**2):
    print("right-angled triangle")
```

```
Enter side 1: 3
Enter side 2: 4
Enter side 3: 5
scalene
```

1.0.9 10) WAP to find the second largest number among three user input numbers.

[21]:
```
a = int(input("Enter  1: "))
b = int(input("Enter  2: "))
c = int(input("Enter  3: "))

if a>b:
    if a>c:
        print("c is second")
    else:
        print("a is second")
else:
    if b>c:
        print("c is second")
    else:
```

```
        print("b is second")
```

```
Enter  1: 2
Enter  2: 3
Enter  3: 5
b is second
```

1.0.10 11) WAP to calculate electricity bill based on following criteria. Which takes the unit from the user.

a. First 1 to 50 units – Rs. 2.60/unit
b. Next 50 to 100 units – Rs. 3.25/unit
c. Next 100 to 200 units – Rs. 5.26/unit
d. above 200 units – Rs. 8.45/unit

[32]:
```
unit = int(input("Enter units: "))
totalSum = 0

# First 50 units
if unit > 0:
    if unit > 50:
        totalSum += 50 * 2.60
        unit -= 50
    else:
        totalSum += unit * 2.60
        unit = 0

# Next 50 units (51 to 100)
if unit > 0:
    if unit > 50:
        totalSum += 50 * 3.25
        unit -= 50
    else:
        totalSum += unit * 3.25
        unit = 0

# Next 100 units (101 to 200)
if unit > 0:
    if unit > 100:
        totalSum += 100 * 5.26
        unit -= 100
    else:
        totalSum += unit * 5.26
        unit = 0

# Above 200 units
if unit > 0:
    totalSum += unit * 8.45
```

```
# Print total sum
print("Total cost: Rs.", totalSum)
```

```
Enter units: 350
Total cost: Rs. 2086.0
```

[ ]: