1blqkw39o

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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.

[5]:
```
a=int(input("enter a"));

# if(a>0):
#     print("number is positive");
# else:
#     print("number is negative");

print("number is positive") if(a>0) else print("number is negative");
```

```
enter a -2
```

```
number is negative
```

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

[8]:
```
a=int(input("enter number"));
print("number is even") if(a%2==0) else print("number is odd");
```

```
enter number 5
```

```
number is odd
```

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

[11]:
```
a=int(input("enter a"));
b=int(input("enter b"));

# simple if
if(a>b):
```

```
    print(a);
else:
    print(b);

# ternary
print(a) if(a>b) else print(b);
```

```
enter a 10
enter b 4
```

```
10
10
```

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

[14]:
```
a=int(input("enter a"));
b=int(input("enter b"));
c=int(input("enter c"));
# if(a>b):
#     if(a>c):
#     print("a");
#     else:
#     print("c");
# else:
#     if(b>c):
#         print("b");
#     else:
#         print("c");

print(a) if(a>c) else print(c) if(a>b) else print(b) if(b>c) else print(c)
```

```
enter a 10
enter b 50
enter c 23
```

```
50
```

1.0.5 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]

[18]:
```
year= int(input("enter the year"));

if((year%4==0 and year%100!=0) or year%400==0):
    print("it is a leap year");
else:
    print("it is not a leap year");
```

```
enter the year 2029

it is not a leap year
```

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

[20]:
```
num=int(input("enter number"));
match(num):
    case 0:
        print("sunday");
    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 _:
        print("enter vaid number from 0 to 6");
```

```
enter number 5

friday
```

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

[24]:
```
a=int(input("enter a"));
c=input("enter operator");
b=int(input("enter b"));

match(c):
    case "+":
        print(a+b);
    case "-":
        print(a-b);
    case "%":
        print(a%b);
    case '/':
        print(a/b);
    case '*':
        print(a*b);
    case _:
```

```
        print("invalid");
```

```
enter a 5
enter operator +
enter b 6
```

```
11
```

1.0.8 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

[26]:
```
a=int(input("enter a"));
b=int(input("enter b"));
c=int(input("enter c"));
d=int(input("enter d"));
e=int(input("enter e"));
sum=((a+b+c+d+e)*100)/500;
if(sum>70):
     print("Distinction");
elif(sum<70 and sum>60):
    print("First class");
elif(sum<60 and sum>45):
    print("Second class");
elif(sum<45 and sum>35):
    print("pass");
else:
    print("fail");
```

```
enter a 45
enter b 56
enter c 65
enter d 26
enter e 56
```

```
Second class
```

1.0.9 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.

[42]:
```
a=int(input("enter a"));
b=int(input("enter b"));
c=int(input("enter c"));

if(a==b and b==c and c==a):
    print("Equilateral triangle");
elif((a==b and a!=c) or (b!=c and a==c) or(a!=b and b==c)):
```

```
    print("Isoceles triangle");
else:
    print("Scalene triangle");
if((a**2+b**2==c**2) or (a**2==b**2+c**2) or a**2+c**2==b**2):
    print("Right angled triangle");
```

```
enter a 3
enter b 4
enter c 5
```

```
Scalene triangle
Right angled triangle
```

[ ]:

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

[58]:
```
a=int(input("enter a"));
b=int(input("enter b"));
c=int(input("enter c"));
# if(a>b):
#     if(a<c):
#         print(a);
#     else:
#         print(c);
# elif(b<c and):

# else:
#     print(c);
if((a<c and a>b) or (a<b and a>c)):
    print(a);
elif((c<a and c>b) or (c<b and c>a)):
    print(c);
else:
    print(b);
```

```
enter a 1
enter b 2
enter c 3
```

```
2
```

1.0.11 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

[5]:
```
units = float(input("Enter the number of units consumed: "))
price = 0

if units <= 50:
    price = units * 2.60
elif units <= 100:
    price = (50 * 2.60) + ((units - 50) * 3.25)
elif units <= 200:
    price = (50 * 2.60) + (50 * 3.25) + ((units - 100) * 5.26)
else:
    price = (50 * 2.60) + (50 * 3.25) + (100 * 5.26) + ((units - 200) * 8.45)

print(f"The electricity price for {units} units is: Rs. {price:.2f}")
```

```
Enter the number of units consumed:  156
The electricity price for 156.0 units is: Rs. 587.06
```