

Q1. WAP to input 2 numbers and check whether the first is divisible by the second and print true or false depending on the visibility

```
In [2]: n1=int(input("enter 1st number"))
n2=int(input("enter 2nd number"))
if ((n1%n2)==0):
    print("1st number is divisible by 2nd number")
else:
    print("1st number is not divisible by 2nd number")
```

```
enter 1st number10
enter 2nd number5
1st number is divisible by 2nd number
```

Q2. in the palindrome example ,make the code case insensitive."

```
In [1]: s=(input("enter a string:")).lower()
if (s == s[::-1]):
    print("The string is palindrome")
else:
    print("The string is not palindrome")
```

```
enter a string:Nayan
The string is palindrome
```

Q3.WAP to input the sides of a traingle and Print whether equilateral(all sides equal),isosceles(2 sides equal)or scalene(no side equal)

```
In [1]: s1=int(input("enter side 1: "))
s2=int(input("enter side 2: "))
s3=int(input("enter side 3: "))
if s1==s2 and s1==s3 and s2==s3 :
    print("It is equilateral(all sides equal)")
elif s1==s2 or s1==s3 or s2==s3 :
    print("It is isosceles(2 sides equal)")
else:
    print("It is scalene(no side equal)")
```

```
enter side 1: 3
enter side 2: 5
enter side 3: 3
It is isosceles(2 sides equal)
```

Q4. WAP to input a number and print if it is

even or odd

```
In [1]: n1=int(input("enter a number : "))
        if n1%2==0:
            print("{} is even number".format(n1))
        else:
            print("{} it is odd number".format(n1))
```

enter a number : 4
4 is even number

Q5. WAP to input age and print the respective text depending on the age ranges as present in the table

```
In [9]: age=int(input("Enter age : "))
        if age>=0 and age<=12:
            print("Child")
        elif age>=13 and age<=17:
            print("Teen")
        elif age>=18 and age<=50:
            print("Adult")
        elif age>=51 and age<=100:
            print("Senior Citizen")
        elif age>=100:
            print("Contratulations")
```

Enter age : 25
Adult

Q6. WAP to input year (check if user enters valid year .should be 4 digit number and should not be negative)and print whether leap year or not .

```
In [9]: try:
        year = int(input("Enter a year: "))
        if int(year) in range(1000,9999):
            if (year % 4) == 0:
                if (year % 100) == 0:
                    if (year % 400) == 0:
                        print("{} is a leap year".format(year))
                    else:
                        print("{} is not a leap year".format(year))
                else:
                    print("{} is a leap year".format(year))
            else:
                print("{} is not a leap year".format(year))
        else:
            print("year should be 4 digit number")
    except:
        print("please enter valid 4 digits positive number only")
```

Enter a year: -12
year should be 4 digit number

Q7. WAP to input a string and convert it to Uppercase if number of characters is odd and convert to lower case otherwise

```
In [2]: s=input("Enter a string: ").upper()
print(s)
if len(s)%2!=0:
    print(s.lower())
```

```
Enter a string: Pratiksha
PRATIKSHA
pratiksha
```

Q8. WAP to input a string and print Veg if the string doesn't contain the word egg. otherwise print Non-Veg as usual eggs can be both big and small

```
In [2]: s=input("Enter a string: ")
if s!='egg':
    print("Veg")
else:
    print("Non veg")
```

```
Enter a string: Egg
Veg
```

Q9. Give output

```
In [3]: if not 1:
        print("False")
else:
    print("True")
```

True

```
In [4]: if not 1:
        print("True")
else:
    print("False")
```

False

```
In [5]: if 'a'>'A':
        print("Weird!!")
else:
    print("Makes Sense")
```

Weird!!

```
In [6]: a=[1,2,3,4]
if 1>1:
```

```
a=a[::-1]
else:
    a=a[-1::-1]
print(a)
```

[4, 3, 2, 1]

Q10. WAP to input in 5 subjects and print the grade as per following logic:

In [7]:

```
s1=(int(input("Enter the 1st subject marks")))
s2=(int(input("Enter the 2nd subject marks")))
s3=(int(input("Enter the 3rd subject marks")))
s4=(int(input("Enter the 4th subject marks")))
s5=(int(input("Enter the 5th subject marks")))
sum=(s1+s2+s3+s4+s5)
total=500
per=((sum/total)*100)
print("% percentage in 5 subjects are :",per)
if per>=90 and per<=100:
    print("Grade A")
elif per>=80 and per<=89:
    print("Grade B")
elif per>=60 and per<=79:
    print("Grade C")
elif per<60:
    print("Grade F")
```

```
Enter the 1st subject marks98
Enter the 2nd subject marks97
Enter the 3rd subject marks96
Enter the 4th subject marks95
Enter the 5th subject marks96
% percentage in 5 subjects are : 96.39999999999999
Grade A
```

Q11. WAP to input age and salary and calculate Tax as per tax rates if following table

In [13]:

```
age=(int(input("Enter the age")))
sal=(int(input("Enter the salary")))
if age<60:
    if sal<=250000:
        print("0% tax")
    elif sal in range(250001,500000):
        print("5% tax")
    elif sal in range(500001,1000000):
        print("10% tax")
    elif sal <=1000001:
        print("15% tax")
elif age>=60:
    if sal<=250000:
        print("0% tax")
    elif sal in range(250001,500000):
        print("3% tax")
    elif sal in range(500001,1000000):
        print("8% tax")
```

```
elif sal <=1000001:
    print("12% tax")
```

Enter the age25
Enter the salary300001
5% tax

Q12. try each of the below statements separately (remember difference between statement and expression) on the python interpreter and guess the output

In [14]: `print(20 if not 1 == 1 else 10)`

10

In [16]: `print(30 if not 1 == 1 else 20 if 'a' < 'A' else 10)`

10

In [17]: `print(40 if not 1 == 1 else 30 if 'a' < 'A' else 20 if '' else 10)`

10

In [18]: `print('NO' if not 1==1 else('NO' if 'a' < 'A' else ('OMG' if 'oh!!' else 'NO')))`

OMG

Q13.WAF bmi() that takes the weight in kg and height in cm of person ,calculates and returns the BMI.write code that calls this function after taking height and weight as inputs and then prints underweight ,normal,overweight or obese depending on the value of Bml

In [35]:

```
def bmi():
    w=float(input("enter weight in kg "))
    h=float(input("enter height in cm "))
    BMI=w/((h/100)**2)
    print("BMI result is: ",BMI)
    if BMI <= 18.5:
        print("Underweight")
    elif BMI > 18.5 and BMI <= 24.9:
        print("Normal Weight")
    elif BMI >= 25 and BMI <= 29.9:
        print("Overweight")
    elif BMI >= 30 and BMI <= 34.9:
        print("Obese")
bmi()
```

```

enter weight in kg 67
enter height in cm 161
BMI result is: 25.847768218818715
Overweight

```

Q14. Take input of age of 3 people by user and determine oldest and yougest among them

In [25]:

```

p1=int(input("Enter 1st person age: "))
p2=int(input("Enter 2nd person age: "))
p3=int(input("Enter 3rd person age: "))
print("-----")
if p1>p2 and p1>p3:
    print("1st person is the oldest person and age is ",p1)
elif p2>p1 and p2>p3:
    print("2nd person is the oldest person and age is",p2)
elif p3>p1 and p3>p2:
    print("3rd person is the oldest person and age is",p3)

if p1<p2 and p1<p3:
    print("1st person is the Youngest person and age is",p1)
elif p2<p1 and p2<p3:
    print("2nd person is the youngest person and age is",p2)
elif p3<p1 and p3<p2:
    print("3rd person is the youngest person and age is",p3)

```

```

Enter 1st person age: 45
Enter 2nd person age: 25
Enter 3rd person age: 78
-----
3rd person is the oldest person and age is 78
2nd person is the youngest person and age is 25

```

Q15. WAP to input a number and check if number is divisible by 5 and 7

In [37]:

```

num=int(input("Enter number "))

if ((num % 5 == 0) and (num % 7 == 0)):
    print(num,"this number is divisible by 5 and 7")
else:
    print(num,"this number is not divisible by both")
if (num%5==0):
    print (num,"this number is divisible by 5")
else:
    print(num,"This number is not divisible by 5")
if (num%7==0):
    print(num,"number is divisible by 7")
else:
    print(num,"This number is not divisible by 7")

```

```

Enter number 55
55 this number is not divisible by both
55 this number is divisible by 5
55 This number is not divisible by 7

```