In [1]:
```
# WAP to determine whether a person is eligible to cast vote or not.
age = int(input("Enter The age of candidate : "))
if age>=18:
    print("You are eligible to vote")
else:
    print("You can vote after " , 18-age , " years")
```

```
Enter The age of candidate : 16
You can vote after  2  years
```

In [2]:
```
#WAP to enter any character. If entered character is in lowercase then convert it into uppercase and vice-versa.
ch = input("Enter a character: ")
x = ord(ch)
if x>=65 and x<=90:
    x+=32
    print("The charater in uppercase is " , chr(x))
else:
    x-=32
    print("The charater in uppercase is " , chr(x))
```

```
Enter a character: U
The charater in uppercase is  u
```

In [3]:
```
# Calculate the bonus that has to be given to the employee and display the salary that employee will get.
salary = float(input("Enter the salary "))
gender = input("Enter your gender (F/M): ")
bonus = 0;
if salary<20000:
    bonus += salary * 0.05
    if gender == 'M':
        bonus += salary * 0.05
    else:
        bonus += salary * 0.1
else:
    if gender == 'M':
        bonus += salary * 0.05
    else:
        bonus += salary * 0.1
print("Bonus of the employee: ",bonus)
print("Final Salary of the employee: " , salary+bonus)
```

```
Enter the salary 190000
Enter your gender (F/M): F
Bonus of the employee:  19000.0
Final Salary of the employee:  209000.0
```

In [28]:
```
#WAP to find a given year is leap year.
year = int(input("Enter a year "))
if (year % 400 == 0) and (year % 100 == 0):
    print(year , " is a leap year")
elif (year % 4 ==0) and (year % 100 != 0):
    print(year ," is a leap year")
else:
    print(year ," is not a leap year")
```

```
Enter a year 2016
2016  is a leap year
```

In [6]:
```
# WAP to calculate tax of an employ as per the present income tax norms.
income = float(input("Enter your annual income: "))
tax = 0;
if income<=300000:
    tax = 0
elif income>300000 and income<=500000:
    tax = income*0.05
elif income>500000 and income<=1000000:
    tax = income*0.2
else:
    tax = income*0.3
print("Your tax amount is " , tax)
```

```
Enter your annual income: 1300000
Your tax amount is  390000.0
```

In [7]:
```
# WAP to find the grade of a students. Put conditions as applied in your university.
mark = float(input("Enter your mark "))
if(mark>=90 and mark<=100):
    print("Your grade is O")
elif(mark>=80 and mark<90):
    print("Your grade is E")
elif(mark>=70 and mark<80):
    print("Your grade is A")
elif(mark>=60 and mark<70):
    print("Your grade is B")
elif(mark>=50 and mark<60):
    print("Your grade is C")
elif(mark>=40 and mark<50):
    print("Your grade is D")
else:
    print("Your grade is F")
```

```
Enter your mark 47
Your grade is D
```

In [9]:
```
# WAP to read numbers till _1 is encountered. Find the positive and negative numbers entered by user.
print("Enter the numbers until -1: ")
pos = 0
neg = 0
while True:
    x = int(input())
    if x==-1:
        break
    if x>0:
        pos+=1
    elif x<0:
        neg+=1
print("The number of positive is ",pos ," and negative is ",neg)
```

```
Enter the numbers until -1:
2
3
-4
-5
-9
-1
The number of positive is  2  and negative is  3
```

In [11]:
```
# WAP to find whether the given number is an Amstrong number or not.
num = int(input("Enter a number: "))
sum = 0
temp = num
while temp > 0:
   digit = temp % 10
   sum += digit ** 3
   temp //= 10
if num == sum:
   print(num,"is an Armstrong number")
else:
   print(num,"is not an Armstrong number")
```

```
Enter a number: 153
153 is an Armstrong number
```

In [12]:
```
# WAP to enter binary number and convert that to decimal.
by = int(input("Enter a binary  number "))
dec = 0
i = 0
while(by>0):
    x = by%10
    by //= 10
    if(x==1):
        dec += 2**i
    i+=1
print(dec," is the number in decimal")
```

```
Enter a binary  number 1001010100101
4773  is the number in decimal
```

In [13]:
```
#WAP to print a number in reverse order.
num = int(input("Enter a number "))
rev = 0;
while(num>0):
    x = num%10
    rev = rev*10 + x
    num //= 10
print("The number in reverse order is " , rev)
```

```
Enter a number 17283
The number in reverse order is  38271
```

In [14]:
```
# WAP to classify a given number is prime or no composite.
import math
x = int(input("Enter a number: "))
end = math.sqrt(x)+1
f = 0
i = 2
while(i<end):
    if(x%i==0):
        f+=1
    i+=1

if(f>=1):
    print(x," is a composite number")
else:
    print(x," is prime number")
```

```
Enter a number: 23727
23727  is a composite number
```

In [15]:
```
# WAP to calculate sum of a series
sum = 0
for i in range(1,90,2):
    sum += i
print(sum," is the sum of this pattern")
```

```
2025  is the sum of this pattern
```

In [16]:
```
# WAP to to calculate value of an investment. Input the initial investments and interest rate.
ini_inv = float(input("Enter your intial investment: "))
int_rate = int(input("Enter interest rate "))
print("The annual amount is ",ini_inv+ini_inv/100 * int_rate)
```

```
Enter your intial investment: 1200000
Enter interest rate 13
The annual amount is  1356000.0
```

In [23]:
```
# WAP to generate calendar of a month the start day and the number of days in that month.
days=int(input("Enter the days in month: "))
first=int(input("Enter the first day: "))
print("Sun\tMon\tTue\tWen\tThu\tFri\tSat")
for i in range(1,first):
    print(" ",end="\t")
for i in range(1,days+1):
    print(i,end="\t")
    if (first-1+i)%7==0:
        print(" ")
```

```
Enter the days in month: 28
Enter the first day: 5
Sun     Mon     Tue     Wen     Thu     Fri     Sat
                                1       2       3
4       5       6       7       8       9       10
11      12      13      14      15      16      17
18      19      20      21      22      23      24
25      26      27      28
```

In [29]:
```
# WAP to print different patterns.
a = 5
for i in range(a):
    for j in range(i):
        print(i,end='')
    print()
for i in range(a,0,-1):
    for j in range(i):
        print(i,end='')
    print()

for i in range(a):
    for j in range(a-1,i,-1):
        print(" ",end="")
    for j in range(i):
        print(i,end='')
    print()
print()

for i in range(a):
    for j in range(a):
        if i==0 or j==0 or i==a-1 or j==a-1:
            print("*",end="")
        else:
            print(" ",end="")
    print()
```

```
1
22
333
4444
55555
4444
333
22
1

   1
  22
 333
4444

*****
*   *
*   *
*   *
*****
```

In [ ]:
```

```