

Exercises:

```
In [34]: #1. #num is odd or even using simple if
n=int(input("Enter a num: "))
if(n%2==0):
    print("Even")
if(n%2!=0):
    print("Odd")
```

Enter a num: 3
Odd

```
In [35]: #1. #num is odd or even using simple if
n=int(input("Enter a num: "))
if(n%2==0):
    print("Even")
if(n%2!=0):
    print("Odd")
```

Enter a num: 2
Even

```
In [36]: #2. Check whether the year is leap or not using if...else statement
y=int(input("Enter year:"))
if((y%4==0 and y%100!=0) or (y%400==0)):
    print("leap")
else:
    print("not leap")
```

Enter year:2000
leap

```
In [39]: #2. Check whether the year is leap or not using if...else statement
y=int(input("Enter year:"))
if((y%4==0 and y%100!=0) or (y%400==0)):
    print("leap")
else:
    print("not leap")
```

Enter year:1700
not leap

```
In [2]: #3. Check whether the year is leap or not using nested if...else statement
y=int(input("Enter year:"))
if(y%100!=0):
    if(y%4==0):
        print("leap")
    else:
        print("Not leap")
else:
    if(y%400==0):
        print("leap")
    else:
        print("Not leap")
```

Enter year:1700
Not leap

```
In [40]: #4. #findout max number among 3 numbers using eLif Ladder
a=int(input("Enter num1: "))
b=int(input("Enter num2: "))
c=int(input("Enter num3: "))
if (a>b) and (a>c):
    print(a,"is max")
elif (b>c):
    print(b,"is max")
else:
    print(c,"is max")
```

Enter num1: 2
 Enter num2: 3
 Enter num3: 4
 4 is max

```
In [41]: #5. findout max number among 3 numbers using nested if else
a=int(input("Enter num1: "))
b=int(input("Enter num2: "))
c=int(input("Enter num3: "))
if(a>b):
    if(a>c):
        print(a,"is max")
    else:
        print(c,"is max")
else:
    if(b>c):
        print(b,"is max")
    else:
        print(c,"is max")
```

Enter num1: 2
 Enter num2: 3
 Enter num3: 4
 4 is max

```
In [42]: #6. Check a char is vowel or consonant
c=input("Enter a char:")
if (c=='a' or c=='e' or c=='i' or c=='o' or c=='u'):
    print("vowel")
else:
    print("consonant")
```

Enter a char:a
 vowel

```
In [43]: #6. Check a char is vowel or consonant
c=input("Enter a char:")
if (c=='a' or c=='e' or c=='i' or c=='o' or c=='u'):
    print("vowel")
else:
    print("consonant")
```

Enter a char:b
 consonant

```
In [45]: #7. #Write a program to perform +, -, *, /,%operation according to user's choice
a=int(input("Enter num 1: "))
b=int(input("Enter num 2: "))
c=input("Enter the sign which operation you want to perform: ")
```

```

if(c=='+'):
    print("Addition: ",a+b)
elif(c=='-'):
    print("Subtraction: ",a-b)
elif(c=='*'):
    print("Multiplication: ",a*b)
elif(c=='/'):
    print("Division: ",a/b)
elif(c=='%'):
    print("Modulo: ",a%b)
else:
    print("Enter correct choice as per given sign      ")

```

Enter num 1: 2
 Enter num 2: 3
 Enter the sign which operation you want to perform: *
 Multiplication: 6

In [46]: #7. Write a program to perform +, -, *, /, % operation according to user's choice

```

a=int(input("Enter num 1: "))
b=int(input("Enter num 2: "))
c=input("Enter the sign which operation you want to perform: ")
if(c=='+'):
    print("Addition: ",a+b)
elif(c=='-'):
    print("Subtraction: ",a-b)
elif(c=='*'):
    print("Multiplication: ",a*b)
elif(c=='/'):
    print("Division: ",a/b)
elif(c=='%'):
    print("Modulo: ",a%b)
else:
    print("Enter correct choice as per given sign      ")

```

Enter num 1: 2
 Enter num 2: 3
 Enter the sign which operation you want to perform: +
 Addition: 5

In [48]: #8. Write C program using If-else if Ladder to read marks from keyboard and your program

```

#Marks Grade
#100-80 Distinction
#60-79 First Class
#35-59 Second Class
#0-34 Fail

p=float(input("Enter your percentage: "))
if (p>=80 and p<=100):
    print("Distinction")
elif (p>=60 and p<=79):
    print("First class")
elif (p>=35 and p<=59):
    print("Second class")
else:
    print("Fail")

```

Enter your percentage: 65
 First class

```
In [49]: #9. Enter one number and check it      is positive, neg or zero using nested if else
a=int(input("Enter num:"))
if(a>=0):
    if(a==0):
        print("zero")
    else:
        print("+ve")
else:
    print("-ve")
```

Enter num:2
+ve

```
In [50]: #9. Enter one number and check it      is positive, neg or zero using nested if else
a=int(input("Enter num:"))
if(a>=0):
    if(a==0):
        print("zero")
    else:
        print("+ve")
else:
    print("-ve")
```

Enter num:0
zero

```
In [51]: #9. Enter one number and check it      is positive, neg or zero using nested if else
a=int(input("Enter num:"))
if(a>=0):
    if(a==0):
        print("zero")
    else:
        print("+ve")
else:
    print("-ve")
```

Enter num:-4
-ve

```
In [52]: #10. #write a program to enter attendance of student in percentage and print bonus marks
per=float(input("Enter percentage:"))
if(per>70):
    print("Your bonus marks:",per*15/100)
else:
    print("You are not eligible for bonus marks")
```

Enter percentage:65
You are not eligible for bonus marks

```
In [54]: #10. #write a program to enter attendance of student in percentage and print bonus marks
per=float(input("Enter percentage:"))
if(per>70):
    print("Your bonus marks:",per*15/100)
else:
    print("You are not eligible for bonus marks")
```

Enter percentage:75
Your bonus marks: 11.25

```
In [56]: #11. #Enter three subject marks of student and according to user choice print total, average
```

```
s2=float(input("Enter marks of subject2:"))
s3=float(input("Enter marks of subject3:"))
print("Enter 1 for total\nEnter 2 for average\nEnter 3 for credits")
c=int(input("Enter your choice:"))
if(c==1):
    print("Total:",s1+s2+s3)
elif(c==2):
    print("Average:",(s1+s2+s3)/3)
elif(c==3):
    print("Credits for s1=5\nCredits for s2=5\nCredits for s3=6")
else:
    print("Enter choice only between 1, 2 or 3")
```

```
Enter marks of subject1:34
Enter marks of subject2:45
Enter marks of subject3:56
Enter 1 for total
Enter 2 for average
Enter 3 for credits
Enter your choice:2
Average: 45.0
```

In [57]: #11. #Enter three subject marks of student and according to user choice print total, a

```
s1=float(input("Enter marks of subject1:"))
s2=float(input("Enter marks of subject2:"))
s3=float(input("Enter marks of subject3:"))
print("Enter 1 for total\nEnter 2 for average\nEnter 3 for credits")
c=int(input("Enter your choice:"))
if(c==1):
    print("Total:",s1+s2+s3)
elif(c==2):
    print("Average:",(s1+s2+s3)/3)
elif(c==3):
    print("Credits for s1=5\nCredits for s2=5\nCredits for s3=6")
else:
    print("Enter choice only between 1, 2 or 3")
```

```
Enter marks of subject1:34
Enter marks of subject2:45
Enter marks of subject3:67
Enter 1 for total
Enter 2 for average
Enter 3 for credits
Enter your choice:1
Total: 146.0
```

In [58]: #11. #Enter three subject marks of student and according to user choice print total, a

```
s1=float(input("Enter marks of subject1:"))
s2=float(input("Enter marks of subject2:"))
s3=float(input("Enter marks of subject3:"))
print("Enter 1 for total\nEnter 2 for average\nEnter 3 for credits")
c=int(input("Enter your choice:"))
if(c==1):
    print("Total:",s1+s2+s3)
elif(c==2):
    print("Average:",(s1+s2+s3)/3)
elif(c==3):
    print("Credits for s1=5\nCredits for s2=5\nCredits for s3=6")
else:
    print("Enter choice only between 1, 2 or 3")
```

```
Enter marks of subject1:34
Enter marks of subject2:45
Enter marks of subject3:67
Enter 1 for total
Enter 2 for average
Enter 3 for credits
Enter your choice:3
Credits for s1=5
Credits for s2=5
Credits for s3=6
```

In [59]:

```
#11. #Enter three subject marks of student and according to user choice print total, a
s1=float(input("Enter marks of subject1:"))
s2=float(input("Enter marks of subject2:"))
s3=float(input("Enter marks of subject3:"))
print("Enter 1 for total\nEnter 2 for average\nEnter 3 for credits")
c=int(input("Enter your choice:"))
if(c==1):
    print("Total:",s1+s2+s3)
elif(c==2):
    print("Average:",(s1+s2+s3)/3)
elif(c==3):
    print("Credits for s1=5\nCredits for s2=5\nCredits for s3=6")
else:
    print("Enter choice only between 1, 2 or 3")
```

```
Enter marks of subject1:4
Enter marks of subject2:3
Enter marks of subject3:5
Enter 1 for total
Enter 2 for average
Enter 3 for credits
Enter your choice:4
Enter choice only between 1, 2 or 3
```

In [61]:

```
#12. Write a program to calculate the electricity bill (accept number of unit from user
#Unit Price

#First 100 units      no charge

#Next 100 units Rs 5 per unit

#After 200 units      Rs 10 per unit

#(For example if input unit is 350 than total bill amount is Rs2000)
amt=0
nu=int(input("Enter number of electric unit"))
if nu<=100:
    amt=0
if nu>100 and nu<=200:
    amt=(nu-100)*5
if nu>200:
    amt=500+(nu-200)*10
print("Amount to pay :",amt)
```

```
Enter number of electric unit100
Amount to pay : 0
```

In [62]:

```
#12. Write a program to calculate the electricity bill (accept number of unit from user
#Unit Price
```

```
#First 100 units      no charge

#Next 100 units Rs 5 per unit

#After 200 units      Rs 10 per unit

#(For example if input unit is 350 than total bill amount is Rs2000)
amt=0
nu=int(input("Enter number of electric unit"))
if nu<=100:
    amt=0
if nu>100 and nu<=200:
    amt=(nu-100)*5
if nu>200:
    amt=500+(nu-200)*10
print("Amount to pay :",amt)
```

Enter number of electric unit78

Amount to pay : 0

In [63]: #12. Write a program to calculate the electricity bill (accept number of unit from user
#Unit Price

```
#First 100 units      no charge

#Next 100 units Rs 5 per unit

#After 200 units      Rs 10 per unit

#(For example if input unit is 350 than total bill amount is Rs2000)
amt=0
nu=int(input("Enter number of electric unit"))
if nu<=100:
    amt=0
if nu>100 and nu<=200:
    amt=(nu-100)*5
if nu>200:
    amt=500+(nu-200)*10
print("Amount to pay :",amt)
```

Enter number of electric unit150

Amount to pay : 250

In [65]: #12. Write a program to calculate the electricity bill (accept number of unit from user
#Unit Price

```
#First 100 units      no charge

#Next 100 units Rs 5 per unit

#After 200 units      Rs 10 per unit

#(For example if input unit is 350 than total bill amount is Rs2000)
amt=0
nu=int(input("Enter number of electric unit"))
if nu<=100:
    amt=0
if nu>100 and nu<=200:
    amt=(nu-100)*5
if nu>200:
```

```
amt=500+(nu-200)*10
print("Amount to pay :",amt)
```

Enter number of electric unit350
Amount to pay : 2000

In [66]: #13. Write a program to check whether the last digit of a number(entered by user) is divisible by 3 or not.

```
num=int(input("Enter any number"))
ld=num%10
if ld%3==0:
    print("Last digit of number is divisible by 3 ")
else:
    print("Last digit of number is not divisible by 3 ")
```

Enter any number34
Last digit of number is not divisible by 3

In [67]: #14. Write a program to check whether a number entered is three digit number or not, i.e., it has three digits.

```
num1 = input("Enter any number")
l=len(num1)
if l != 3:
    print("Enter three digit number")
else:
    print("Middle digit is ",(int(num1)%100//10))
```

Enter any number234
Middle digit is 3

In [68]: #14. Write a program to check whether a number entered is three digit number or not, i.e., it has three digits.

```
num1 = input("Enter any number")
l=len(num1)
if l != 3:
    print("Enter three digit number")
else:
    print("Middle digit is ",(int(num1)%100//10))
```

Enter any number4567
Enter three digit number

In [69]: #15.Accept three sides of a triangle and check whether it is an equilateral, isosceles or scalene triangle.

#Note :

```
#An equilateral triangle is a triangle in which all three sides are equal.
#A scalene triangle is a triangle that has three unequal sides.
#An isosceles triangle is a triangle with (at least) two equal sides.
s1=int(input("Enter first side of triangle"))
s2=int(input("Enter second side of triangle"))
s3=int(input("Enter third side of triangle"))
if s1==s2 and s2 == s3:
    print("Equilateral triangle")
if (s1==s2 and s2!=s3) or (s2==s3 and s2!=s1) or (s1==s3 and s1!=s2):
    print("Isosceles Triangle")
if s1!=s2 and s1!=s3 and s2!=s3:
    print("Scalene Triangle")
```

Enter first side of triangle2
Enter second side of triangle3
Enter third side of triangle4
Scalene Triangle

In [70]: #15. Accept three sides of a triangle and check whether it is an equilateral, isosceles
#Note :

```
#An equilateral triangle is a triangle in which all three sides are equal.  

#A scalene triangle is a triangle that has three unequal sides.  

#An isosceles triangle is a triangle with (at least) two equal sides.  

s1=int(input("Enter first side of triangle"))  

s2=int(input("Enter second side of triangle"))  

s3=int(input("Enter third side of triangle"))  

if s1==s2 and s2 == s3:  

    print("Equilateral triangle")  

if (s1==s2 and s2!=s3) or (s2==s3 and s2!=s1) or (s1==s3 and s1!=s2):  

    print("Isosceles Triangle")  

if s1!=s2 and s1!=s3 and s2!=s3:  

    print("Scalene Triangle")
```

Enter first side of triangle3
Enter second side of triangle3
Enter third side of triangle3
Equilateral triangle

In [71]: #15. Accept three sides of a triangle and check whether it is an equilateral, isosceles
#Note :

```
#An equilateral triangle is a triangle in which all three sides are equal.  

#A scalene triangle is a triangle that has three unequal sides.  

#An isosceles triangle is a triangle with (at least) two equal sides.  

s1=int(input("Enter first side of triangle"))  

s2=int(input("Enter second side of triangle"))  

s3=int(input("Enter third side of triangle"))  

if s1==s2 and s2 == s3:  

    print("Equilateral triangle")  

if (s1==s2 and s2!=s3) or (s2==s3 and s2!=s1) or (s1==s3 and s1!=s2):  

    print("Isosceles Triangle")  

if s1!=s2 and s1!=s3 and s2!=s3:  

    print("Scalene Triangle")
```

Enter first side of triangle2
Enter second side of triangle2
Enter third side of triangle3
Isosceles Triangle

In [72]: #16. Write a python program to demonstrate range() function in python.

```
for i in range(6):  

    print(i)
```

0
1
2
3
4
5

In [73]: #17. print odd numbers
for i in range(1,6,2):
 print(i)

4

```
In [75]: #18. print numbers 1 to 5 in reverse order
for i in range(5,0,-1):
    print(i)
```

5
4
3
2
1

```
In [77]: #19. #To print characters present in the given string.
s="Welcome to LJIET"
for i in s:
    print(i)
```

W
e
l
c
o
m
e

t
o

L
J
I
E
T

```
In [80]: #20. #To print characters present in the given string.
s="Welcome to LJIET"
for i in s:
    print(i,end="")
```

Welcome to LJIET

```
In [82]: #21. Write a python program to find the sum of first N natural numbers.
n = int(input("Enter the number up to which you want the sum"))
sum= 0
for i in range(1,n+1):
    sum=sum + i
print("sum is", sum)
```

Enter the number up to which you want the sum
sum is 39

```
In [83]: #22. #Write a python program to find the average of first N natural numbers.
n = int(input("Enter the number up to which you want the sum"))
sum= 0
for i in range(1,n+1):
    sum=sum + i
print("Average is", sum/n)
```

Enter the number up to which you want the sum
Average is 6.5

```
In [94]: #23. #Write a python program to read three numbers (a,b,c) and check how many numbers
a=int(input("Enter first number"))
```

```
b=int(input("Enter second number"))
c=int(input("Enter third number"))
count= 0
for i in range(a+1,b):
    if(i%c==0):
        count=count+1
print("The total numbers between",a,"and",b,"divisible by",c,"is",count)
```

Enter first number10
 Enter second number20
 Enter third number3
 The total numbers between 10 and 20 divisible by 3 is 3

In [96]: #24. #Write a Python program to print all numbers from 0 to 6 except 3 and 6.

```
for i in range(1,7):
    if (i==3 or i==6):
        continue
    else:
        print(i)
```

1
 2
 4
 5

In [101...]: #25. #Write a Python program to print the multiplication table of given number by user

```
n=int(input("Enter number which table you want:"))
i=1
while (i<=10):
    print(n, "*", i, "=", n*i)
    i=i+1
```

Enter number which table you want:5
 5 * 1 = 5
 5 * 2 = 10
 5 * 3 = 15
 5 * 4 = 20
 5 * 5 = 25
 5 * 6 = 30
 5 * 7 = 35
 5 * 8 = 40
 5 * 9 = 45
 5 * 10 = 50

In [103...]: #26. Write a Python program to find the factorial of a number provided by the user.

```
n=int(input("Enter a number"))
factorial=1
if n<0:
    print("Negative numbers are not allowed")
elif n==1 or n==0:
    print("Factorial of number",n,"is",factorial)
else:
    for i in range(1,n+1):
        factorial=factorial*i
print("Factorial of number",n,"is",factorial)
```

Enter a number5
 Factorial of number 5 is 120

In [104...]: #26. Write a Python program to find the factorial of a number provided by the user.

```
n=int(input("Enter a number"))
```

```

factorial=1
if n<0:
    print("Negative numbers are not allowed")
elif n==1 or n==0:
    print("Factorial of number",n,"is",factorial)
else:
    for i in range(1,n+1):
        factorial= factorial*i
print("Factorial of number",n,"is",factorial)

```

Enter a number1

Factorial of number 1 is 1

In [106...]

```

#27. Write a python program to display the Fibonacci sequence up to n-th term.
n=int(input("Enter the numbers of terms upto which you want the fibonacci sequence"))
n1=0
n2=1
if(n<=0):
    print("Enter Positive integer")
elif(n==1):
    print("Fibonacci sequence upto first term is",n1)
else:
    print("Fibonacci sequence is:")
    print(n1)
    print(n2)
for i in range(n-2):
    nth=n1+n2
    print(nth)
    n1=n2
    n2=nth

```

Enter the numbers of terms upto which you want the fibonacci sequence5

Fibonacci sequence is:

0
1
1
2
3

In [107...]

```

#28. Write a program to take 10 values from keyboard using Loop and print their average
sum=0
print("Enter 10 numbers")
for i in range(10):
    a=int(input())
    sum=sum+a
print("The sum of 10 numbers is",sum)
print("Average of Entered 10 numbers is",sum/10)

```

Enter 10 numbers

1
2
4
5
7
8
9
10
11
12

The sum of 10 numbers is 69

Average of Entered 10 numbers is 6.9

In [109...]

```
#29. Write a Python program to find the reverse of a number provided by the user.
num = int(input("Enter a number:"))
reversed_num = 0
while num != 0:
    digit = num % 10
    reversed_num = reversed_num * 10 + digit
    num //= 10
print("Reversed Number: ", reversed_num)
```

Enter a number:123

Reversed Number: 321

In [110...]

```
#30. Write a Python program to find the sum of digits Ex:-num=123=1+2+3=6
num = int(input("Enter a number:"))
sum=0
while num != 0:
    digit = num % 10
    sum = sum + digit
    num //= 10
print("Sum of digit: ", sum)
```

Enter a number:123

Sum of digit: 6

In [111...]

```
#31. Write a program to print multiple of N from given range of integers.
#For example, if N=5 and range is [17, 45) it prints 20, 25, 30, 35, 40, 45.
N = int(input("Enter N:"))
start = int(input("Enter start:"))
end = int(input("Enter end:"))
for i in range(start, end+1):
    if(i%N==0):
        print(i, end=" ")
```

Enter N:5

Enter start:10

Enter end:50

10 15 20 25 30 35 40 45 50

In [113...]

```
#32. Write a program to print all Armstrong numbers in a given range.
#Armstrong number is equal to sum of cubes of its individual digits.
#For example 153 = 1A3 + 5A3 + 3A3. So, 153 is Armstrong number.
N = int(input("Enter N:"))
temp=N
sum=0
while temp!=0:
    d=temp%10
    sum=sum+(d*d*d)
    temp=temp//10
if(sum==N):
    print("Armstrong number.")
else:
    print("Not an Armstrong number")
```

Enter N:153

Armstrong number.

In [114...]

```
#32. Write a program to print all Armstrong numbers in a given range.
#Armstrong number is equal to sum of cubes of its individual digits.
#For example 153 = 1A3 + 5A3 + 3A3. So, 153 is Armstrong number.
N = int(input("Enter N:"))
```

```

temp=N
sum=0
while temp!=0:
    d=temp%10
    sum=sum+(d*d*d)
    temp=temp//10
if(sum==N):
    print("Armstrong number.")
else:
    print("Not an Armstrong number")

```

Enter N:142
Not an Armstrong number

In [115...]

```

#33. #Write a program to check if a number is prime or not.
n = int(input("Enter n:"))
flag=0
for i in range(2,n):
    if (n%i==0):
        flag=1
        break
if(flag==0):
    print(n,"is a prime number")
else:
    print(n,"is not a prime number")

```

Enter n:13
13 is a prime number

In [116...]

```

#33. #Write a program to check if a number is prime or not.
n = int(input("Enter n:"))
flag=0
for i in range(2,n):
    if (n%i==0):
        flag=1
        break
if(flag==0):
    print(n,"is a prime number")
else:
    print(n,"is not a prime number")

```

Enter n:20
20 is not a prime number

In [118...]

```

#34. #Write a program to print prime number between given interval from user
a= int(input("Enter start:"))
b = int(input("Enter stop:"))
for j in range(a,b+1):
    flag=0
    for i in range(2,j):
        if (j%i==0):
            flag=1
    if(flag==0):
        print(j,end=",")

```

Enter start:10
Enter stop:20
11,13,17,19,23,

In [120...]

#35. pattern for n rows

```

*
*
* *
* * * *"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,i+1):
        print("*",end=" ")
    print()

```

Enter Number of rows:4

```

*
*
* *
* * * *
```

In [122...]

```
#35. pattern for n rows using integer.

"""
1
2 2
3 3 3
4 4 4 4"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,i+1):
        print(i,end=" ")
    print()
```

Enter Number of rows:4

```

1
2 2
3 3 3
4 4 4 4
```

In [124...]

#36. #Draw a pattern using a python program:

```

"""
1
1 2
1 2 3
1 2 3 4"""
```

```

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,i+1):
        print(j,end=" ")
    print()
```

Enter Number of rows:4

```

1
1 2
1 2 3
1 2 3 4
```

In [126...]

#37. pattern for n rows

```

"""
* *
* *
* *
* """
```

```
n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,n+2-i):
        print("*",end=" ")
    print()
```

Enter Number of rows:4

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

In [127...]

#38. pattern for n rows

```
"""
* * *
* *
*
*
"""


```

```
n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,i+1):
        print(" ",end="")
    for j in range(i,n+1):
        print("*",end="")
    print()
```

Enter Number of rows:4

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

In [128...]

#39. pattern for n rows

```
"""
1 2 3
1 2
1
"""


```

```
n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,n+2-i):
        print(j,end=" ")
    print()
```

Enter Number of rows:4

```
1 2 3 4
1 2 3
1 2
1
```

In [129...]

#40. Pattern for n rows:

```
"""
1
2 3
4 5 6
```

```

7 8 9 10 """
n=int(input("Enter Number of rows:"))
k=1
for i in range(1,n+1):
    for j in range(1,i+1):
        print(k,end=" ")
        k=k+1
    print()

```

Enter Number of rows:4

```

1
2 3
4 5 6
7 8 9 10

```

In [131...]

```

#41. Pattern for n rows.
"""
A
B C
D E F
G H I J

"""
n = int(input("Enter Number of rows:"))
k=65
for i in range(1,n+1):
    for j in range(1,i+1):
        print(chr(k),end=" ")
        k=k+1
    print()

```

Enter Number of rows:4

```

A
B C
D E F
G H I J

```

In [132...]

```

#42. Pattern for n rows:
"""
a
b c
d e f
g h i j

"""

n = int(input("Enter Number of rows:"))
k=97
for i in range(1,n+1):
    for j in range(1,i+1):
        print(chr(k),end=" ")
        k=k+1
    print()

```

Enter Number of rows:4

```

a
b c
d e f
g h i j

```

In [136...]

#43. Pattern for n rows:

```
"""
A
A B
A B C
A B C D
"""
```

```
n = int(input("Enter Number of rows:"))

for i in range(1,n+1):
    k=65
    for j in range(1,i+1):
        print(chr(k),end=" ")
        k=k+1
    print()
```

Enter Number of rows:4

```
A
A B
A B C
A B C D
```

In [138...]

#44. #pattern for n rows

```
"""
*
* *
* * *
* * * *

"""
```

```
n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,n-i+1):
        print(end=" ")
    for j in range(1,i+1):
        print("* ",end="")
    print()
```

Enter Number of rows:4

```
*
```

$$\begin{array}{c} * \\ * * \\ * * * \\ * * * * \end{array}$$

In [140...]

#45. #pattern for n rows

```
"""
1
A B
1 2 3
A B C D """

```

```
n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
```

```

l=65
g=1
for k in range(1,n-i+1):
    print(end=" ")
for j in range(1,i+1):
    if(i%2==0):
        print(chr(l) ,end=" ")
        l=l+1
    else:
        print(g,end=" ")
        g=g+1
print()

```

Enter Number of rows:4

```

1
A B
1 2 3
A B C D

```

In [147...]

#46. Pattern for n rows:

```

"""
12345
2345
345
45
5"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,i+1):
        print(end=" ")
    for j in range(i,n+1):
        print(j,end="")
    print()

```

Enter Number of rows:5

```

12345
2345
345
45
5

```

In [149...]

#47. pattern for n rows

```

"""
54321
4321
321
21
1"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,i+1):
        print(end=" ")
    for j in range(n-i+1,0,-1):
        print(j,end="")
    print()

```

```
Enter Number of rows:5
54321
4321
321
21
1
```

In [148...]

```
#48. '''Draw a pattern using a python program:
"""
*
# #
* * *
# # # #"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,i+1):
        if(i%2==0):
            print("#",end=" ")
        else:
            print("*",end=" ")
    print()
```

```
Enter Number of rows:5
*
# #
* * *
# # # #
* * * * *
```

In [150...]

```
#49. Draw a pattern using a python program:
"""
1
0 1
1 0 1
0 1 0 1"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for j in range(1,i+1):
        print((i+j-1)%2,end=" ")
    print()
```

```
Enter Number of rows:5
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

In [152...]

```
#50. '''Draw a pattern using a python program:
"""
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5 """

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,n-i+1):
```

```

        print(end=" ")
    for j in range(1,i+1):
        print(j,end=" ")
    print()

```

Enter Number of rows:5

```

    1
    1 2
    1 2 3
    1 2 3 4
    1 2 3 4 5

```

In [153...]

#51. Python program for following pattern:

```

"""
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,n-i+1):
        print(end=" ")
    for j in range(1,i+1):
        print(i,end=" ")
    print()

```

Enter Number of rows:5

```

    1
    2 2
    3 3 3
    4 4 4 4
    5 5 5 5 5

```

In [156...]

#52. Write a Python Program for the following pattern:

```

"""
*
# #
* * *
# # # #
* * * * *
"""

n = int(input("Enter Number of rows:"))
for i in range(1,n+1):
    for k in range(1,n-i+1):
        print(end=" ")
    for j in range(1,i+1):
        if(i%2==0):
            print("# ",end="")
        else:
            print("* ",end="")
    print()

```

Enter Number of rows:5

```

    *
    # #
    * * *
    # # # #
    * * * * *

```

In [157...]

#53. Python Program to print identity matrix.

```
n=int(input("Enter a number: "))
```

```

for i in range(0,n):
    for j in range(0,n):
        if(i==j):
            print("1",sep=" ",end=" ")
        else:
            print("0",sep=" ",end=" ")
    print()

```

Enter a number: 3

```

1 0 0
0 1 0
0 0 1

```

In [158...]

```

#54. Python Program to Find the LCM of Two Numbers
a=int(input("Enter the first number:"))
b=int(input("Enter the second number:"))
if(a>b):
    min1=a
else:
    min1=b
while(1):
    if(min1%a==0 and min1%b==0):
        print("LCM is:",min1)
        break
    min1=min1+1

```

Enter the first number:24

Enter the second number:34

LCM is: 408

In [159...]

```

#55. Write a python program to check entered number is positive or negative using a condition
a=int(input("Enter number:"))
print("positive") if (a>0) else print("negative")

```

Enter number:3

positive

In [160...]

```

#56. Python Program to Read a Number n and Compute n+nn+nnn
n=int(input("Enter a number n: "))
temp=str(n)
t1=temp+temp
t2=temp+temp+temp
comp=n+int(t1)+int(t2)
print("The value is:",comp)

```

Enter a number n: 3

The value is: 369