'''

Name : Divyansh Dhaundiyal

University Roll no : 2021197

Section : K

Q1. Write a python program to accept the cost price of a bike and display the road tax to be paid according to following criteria:

Cost price (in Rs) Tax

>100000 15%

>50000 and <=100000 10%

<=50000 5%

'''

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

cp=int(input("Enter cost price : "))

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

if cp>100000:

rtax=cp\*0.15

cp=cp+rtax

elif cp>50000 and cp<=100000:

rtax=cp\*0.10

cp=cp+rtax

elif cp<=50000:

rtax=cp\*0.05

cp=cp+rtax

print("The road tax is : ",rtax)

print("Total price of the bike including the road tax is : ",cp)

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter cost price : 50000

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

The road tax is : 2500.0

Total price of the bike including the road tax is : 52500.0

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter cost price : 70000

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

The road tax is : 7000.0

Total price of the bike including the road tax is : 77000.0

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter cost price : 110000

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

The road tax is : 16500.0

Total price of the bike including the road tax is : 126500.0

'''

Name : Divyansh Dhaundiyal

University Roll no : 2021197

Section : K

Q2. Write a program in Python. A library charges a fine for every book returned late. For First 5 days the fine is 50 paisa/day, for 6-10 days fine is one rupee/day and above 10 days fine is 5 Rupees/ per day. If you return the book after 30 days your membership will be cancelled. Write a program to accept the number of days the member is late to return the book and display the fine or the appropriate message.

'''

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

day=int(input("Enter number of days the member is late to return the book : "))

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

if day<=5:

fine=0.50\*day

print("Total fine is : Rs",fine)

elif day>=6 and day<=10:

fine=1\*day

print("Total fine is : Rs",fine)

elif day>10 and day<=30:

fine=5\*day

print("Total fine is : Rs",fine)

else:

print("Membership cancelled")

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter number of days the member is late to return the book : 5

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Total fine is : Rs 2.5

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter number of days the member is late to return the book : 7

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Total fine is : Rs 7

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter number of days the member is late to return the book : 30

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Total fine is : Rs 150

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter number of days the member is late to return the book : 31

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Membership cancelled

'''

Name : Divyansh Dhaundiyal

University Roll no : 2021197

Section : K

Q3. Write a python program to print x^y without using library function.

'''

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

x=int(input("Enter base : "))

y=int(input("Enter power : "))

power=1

for i in range(y):

power=power\*x

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

print(power)

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter base : 2

Enter power : 2

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

4

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter base : 5

Enter power : 5

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

3125

'''

Name : Divyansh Dhaundiyal

University Roll no : 2021197

Section : K

Q4. Write a Python program to find the sum of the following series:

1+2^2/2!+3^3/3!+…….+n^n/n!

'''

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

n=int(input("Enter n : "))

sum=0

fact=1

for i in range(1,n+1):

fact=fact\*i

sum=sum+(i\*i/fact)

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

print("Sum of series is :",sum)

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter n : 3

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Sum of series is : 4.5

\*\*\*\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter n : 5

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

Sum of series is : 5.375

'''

Name : Divyansh Dhaundiyal

University Roll no : 2021197

Section : K

Q5. Write a Python program that iterates the integers from 1 to 50. For multiples of three print "3multiple" instead of the number and for multiples of five print "5multiple ". For numbers that are multiples of three and five, print "multipleof3and4 ".

'''

print("\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\n")

for num in range(1, 51):

if num % 3 == 0 and num % 5 == 0:

print("multipleof3and4", end=" ")

elif num % 3 == 0:

print("3multiple", end=" ")

elif num % 5 == 0:

print("5multiple", end=" ")

else:

print(num, end=" ")

\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*

1 2 3multiple 4 5multiple 3multiple 7 8 3multiple 5multiple 11 3multiple 13 14 multipleof3and4 16 17 3multiple 19 5multiple 3multiple 22 23 3multiple 5multiple 26 3multiple 28 29 multipleof3and4 31 32 3multiple 34 5multiple 3multiple 37 38 3multiple 5multiple 41 3multiple 43 44 multipleof3and4 46 47 3multiple 49 5multiple