**def** palindrome(a):  
 n=a  
 rev = 0  
 rem = 0  
 **while** n != 0:  
 rem = n % 10  
 rev = rev \* 10 + rem  
 n = n // 10  
 **if** a == rev:  
 print(**"The number {} is a Palindrome Number"**.format(a))  
 **else**:  
 print(**"The number {} is Not a Palindrome Number"**.format(a))  
  
**def** reverse(a):  
 n=a  
 rev = 0  
 rem = 0  
 **while** n != 0:  
 rem = n % 10  
 rev = rev \* 10 + rem  
 n = n // 10  
 print(**"Reversed Number is:"**,rev)  
  
**def** divisible(a,b):  
 **if** a%b==0:  
 print(**"{} is divisible by {}"**.format(a,b))  
 **else**:  
 print(**"{} is not divisible by {}"**.format(a,b))  
  
**def** factorial(a):  
 i = 1  
 fact = 1  
 **if** a == 0:  
 print(**"Factorial = 1"**)  
 **elif** a < 0:  
 print(**"Factorial of negative avlue not possible"**)  
 **else**:  
 **while** i <= a:  
 fact = fact \* i  
 i = i + 1  
 print(**"Factorial is :"**, fact)  
  
**def** armstrong(a):  
 c = str(a)  
 l = len(c)  
 arm = a  
 sum = 0  
 **while** a != 0:  
 rem = a % 10  
 sum = sum + (rem\*\*l)  
 a = a // 10  
 **if** arm == sum:  
 print(**"Armstrong Number"**)  
 **else**:  
 print(**"Not an Armstrong Number"**)  
  
**def** prime\_composite(a):  
 **if** a > 1:  
 **for** i **in** range(2, (a // 2) + 1):  
 **if** a % i == 0:  
 print(**"Composite Number"**)  
 **break  
 else**:  
 print(**"Prime Number"**)  
 **else**:  
 print(a, **"is a Composite number"**)  
  
**def** gcd(a,b):  
 **if** a == 0 **or** b == 0:  
 print(**"Value must be non zero"**)  
 **else**:  
 **if** a < b:  
 result = a  
 **else**:  
 result = b  
 **while** result:  
 **if** a % result == 0 **and** b % result == 0:  
 **break** result = result - 1  
 print(**"Greatest Common Divisor:"**, result)  
  
**def** sum\_till\_nth(a):  
 i = 0  
 sum = 0  
 **while** (i <= a):  
 sum = sum + i  
 i = i + 1  
 **else**:  
 **while** (a <= 0):  
 sum = sum + a  
 a = a + 1  
 print(**"Sum till {}th Number:"**.format(a), sum)  
  
**def** fibbonaci(a):  
 n = 0  
 b = 1  
 i = 0  
 print(**"Fibbonaci Series upto {}:"**.format(a))  
 **while** (i <= a):  
 print(n, end=**" "**)  
 res = n + b  
 n = b  
 b = res  
 i = i + 1  
 print()  
  
**def** perfect(a):  
 x = 0  
 **for** i **in** range(1, a):  
 **if** (a % i == 0):  
 x = x + i  
 **if** (x == a):  
 print(**"The number {} is a Perfect number"**.format(a))  
 **else**:  
 print(**"The number {} is not a Perfect number"**.format(a))  
  
**def** printch():  
 print(**"Please enter your choice from 1-10. Enter 0 to end"**)  
 print(**"Enter 1 to check whether a number is a Palindrome number or not!"**)  
 print(**"Enter 2 to find the Reverse of a number!"**)  
 print(**"Enter 3 to check whether a number is divisible by another number or not!"**)  
 print(**"Enter 4 to find the Factorial of a number!"**)  
 print(**"Enter 5 to check whether a number is an Armstrong number or not!"**)  
 print(**"Enter 6 to check whether a number is Prime or Composite!"**)  
 print(**"Enter 7 to find the Greatest Common Divisor or Highest Common Factor!"**)  
 print(**"Enter 8 to find the sum of numbers from 0 to entered number!"**)  
 print(**"Enter 9 to find the Fibbonaci series till the entered number!"**)  
 print(**"Enter 10 to check whether a number is a Perfect number or not!"**)  
 print(**"Please enter your choice in INTEGER ONLY!!!"**)  
 n = eval(input(**"Enter Your Choice => "**))  
  
  
print(**"Hello!!"**)  
print(**"Welcome to the menu driven program"**)  
print(**"Please enter your choice from 1-10. Enter 0 to end"**)  
print(**"Enter 1 to check whether a number is a Palindrome number or not!"**)  
print(**"Enter 2 to find the Reverse of a number!"**)  
print(**"Enter 3 to check whether a number is divisible by another number or not!"**)  
print(**"Enter 4 to find the Factorial of a number!"**)  
print(**"Enter 5 to check whether a number is an Armstrong number or not!"**)  
print(**"Enter 6 to check whether a number is Prime or Composite!"**)  
print(**"Enter 7 to find the Greatest Common Divisor or Highest Common Factor!"**)  
print(**"Enter 8 to find the sum of numbers from 0 to entered number!"**)  
print(**"Enter 9 to find the Fibbonaci series till the entered number!"**)  
print(**"Enter 10 to check whether a number is a Perfect number or not!"**)  
print(**"Please enter your choice in INTEGER ONLY!!!"**)  
n=eval(input(**"Enter Your Choice => "**))  
**while**(n!=0):  
 **if** n>10:  
 print(**"Out Of Bounds"**)  
 **else**:  
 **if** n==1:  
 x=int(input(**"Enter the number you want to check for Palindrome => "**))  
 palindrome(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a=str(input(**"Enter your Choice => "**))  
 **if** a==**"Y" or** a==**'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==2:  
 x = int(input(**"Enter the number you want to reverse => "**))  
 reverse(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==3:  
 x = int(input(**"Enter the first number => "**))  
 y = int(input(**"Enter the second number with which you want to check => "**))  
 divisible(x,y)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n == 4:  
 x = int(input(**"Enter the number whose Factorial you want to find => "**))  
 factorial(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==5:  
 x=int(input(**"Enter the number you want to check for Armstrong => "**))  
 armstrong(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a=str(input(**"Enter your Choice => "**))  
 **if** a==**"Y" or** a==**'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==6:  
 x=int(input(**"Enter the number you want to check for Prime or Composite => "**))  
 prime\_composite(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a=str(input(**"Enter your Choice => "**))  
 **if** a==**"Y" or** a==**'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==7:  
 x = int(input(**"Enter the first number => "**))  
 y = int(input(**"Enter the second number => "**))  
 gcd(x,y)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==8:  
 x=int(input(**"Enter the number upto which you want to find the sum => "**))  
 sum\_till\_nth(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a=str(input(**"Enter your Choice => "**))  
 **if** a==**"Y" or** a==**'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==9:  
 x = int(input(**"Enter the number upto which you want to print the Fibbonaci series => "**))  
 fibbonaci(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break  
 elif** n==10:  
 x = int(input(**"Enter the number you want to check for Perfect number => "**))  
 perfect(x)  
 print(**"Do you want to continue?(Y/N)"**)  
 a = str(input(**"Enter your Choice => "**))  
 **if** a == **"Y" or** a == **'y'**:  
 printch()  
  
 **else**:  
 print(**"Thank You for using the Program.............."**)  
 **break**