```
import math


#Task 1
x=input("Enter your name")
y=input("enter you age ")
print("Name: " ,x, "age: ",y)
```

```
PS D:\6th Semester\AI\lab> & "D:/data science/python setup/python.exe" "d:/6th Semester/AI/lab/lab1.py"
Enter your nameMuskan
enter you age 14
Name:  Muskan  age:  14
```

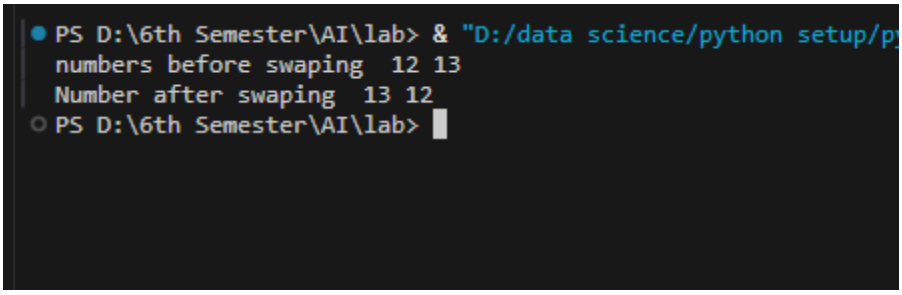
```
#task 2


x=input("ENter the raduis of circle")
reduis=int(x)
print("Area of circle is ", (math.pi*(reduis*reduis)))
```

```
ENter the raduis of circle4
Area of circle is  50.26548245743669
PS D:\6th Semester\AI\lab>
```

```
#task3


a=12
 b=13
 print("numbers before swaping ", a,b)
 temp=a
 a=b
 b=temp
 print("Number after swaping ",a,b)
```



#task4

temprature=30

print((temprature* 9/5) + 32)

#Arthimatic operator

a,b=10,3

print(a+b)

print(a-b)

print(a*b)

print(a/b)

print(a//b)

print(a%b)

print(a**b)

COmparasion operator

x=y=5,10

```
# print("Equal to: ",x==y)
# print(" Not Equal to: ",x!=y)
# print(" Greater than: ",x>y)
# print(" Less than ",x<y)
# print(" Greater than eqaul to ",x>=y)
# print(" less than eqaul to ",x<=y)

#Logical Operator

# a,b=True,False

# print("Logical End", a and b)
# print("Logical Or", a or b)
# print("Logical Not",  not b)

# x=4
# if x==1:
#     print("One")
# elif x==2:
#     print("Two")
# elif x==3:
#     print("Three")
# else:
#     print("No Match")


#Task 5

 num=int(input("ENter any NUmber: "))
```

```
if(num%2==0):
    print("Even")
 else:
    print("Odd")



#Task 6


 a,b,c=1,2,3


 if(a>b and a>c):
    print("First Number is Greater")
 elif(b>a and b>c):
    print("Second Number is Greater")
 else:
    print("Third NUmber is greater")



# Task 7


 year = int(input("Enter a year: "))


 if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print(f"{year} is a leap year.")
 else:
    print(f"{year} is not a leap year.")



#Task 8
```

```
age=int(input("Enter your age please "))
if(age<13):
    print("Child")
elif(age>=13 and age<20):
    print("Teenager")
elif(age>=20):
    print("Adult")
else:
   print("Invalid Input")



# task9


# for i in range(1, 11):
#     print(i, end=" ")




# Task 10


# n=int(input("Enter the range up to which you want sum: "))
# sum=0
# for i in range(1,n+1):
#     sum+=i



# print(sum)
```

```
#task11:

# n=int(input("Enter the number which you want to print the table "))
# for i in range(1,11):
#     print(i,'*',n,"=",i*n)

#task12


# str="Muskan aaa"
# num=0
# for n in str:
#     if n=='a' or n=='e' or n=='i' or n=='o' or n=='u':
#         num+=1

# print("Count of vowels in the string is ", num)

# task13
# def is_prime(n):
#     if n < 2:
#         return False
#     for i in range(2, int(n ** 0.5) + 1):
#         if n % i == 0:
#             return False
#     return True

# print("Prime numbers between 1 and 50:")
# for num in range(1, 51):
```

```
#     if is_prime(num):
#         print(num, end=" ")



# task14 factorial of the given number
# num=5
# multi=1
# for i in range(1,num+1):
#     multi*=i
# print("Factorial of the given number is ",multi)



# task15
# a=input("enter 5 numbers: ")
# l=list(a)
# print(list(a))



#task 16

# l=[1,2,3,4,5]
# sum=0
# for i in range(len(l)):
#     sum+=l[i]

# print("Sum of the elements in the lists are: ",sum ," And average of these elemnts is ",sum/len(l))



#task 17
```

```
# list=[4,5,3,89,22,34]

# #finding largest and smallest elements in the list
# min=list[0]
# max=list[0]

# for i in range(1,len(list)):
#     if min>=list[i]:
#         min=list[i]
#     elif max<=list[i]:
#         max=list[i]

# print(min)
# print(max)



#task 18

# Reverse a list
# def reverse_list(input_list):
#     return input_list[::-1]

# my_list = [1, 2, 3, 4, 5]
# reversed_list = reverse_list(my_list)

# print("Original list:", my_list)
# print("Reversed list:", reversed_list)
```

```
#task 19

# def count_occurrences(input_list, number):
#     count = 0
#     for num in input_list:
#         if num == number:
#             count += 1
#     return count

# my_list = [1, 2, 3, 2, 4, 2, 5, 2]
# number_to_count = 2
# count = count_occurrences(my_list, number_to_count)

# print(f"The number {number_to_count} appears {count} times in the list.")




#Task20

# my_list = [5, 3, 8, 6, 2, 7, 1, 4]
# print("List in the original form: ",my_list)

# # Sorting the list in ascending order
# for i in range(len(my_list)):
#     for j in range(i + 1, len(my_list)):
#         if my_list[i] > my_list[j]:
```

```
#             # Swap the elements if they are in the wrong order
#             my_list[i], my_list[j] = my_list[j], my_list[i]



# print("Sorted list in ascending order:", my_list)



#String TAsks

#task21

# str=input("ENter any string: ")
# print("length of the string is: ",len(str))



#task22

# my_string = "Hello, World!"

# # Reversing the string without slicing
# reversed_string = ""
# for char in my_string:
#     reversed_string = char + reversed_string  # Prepend each character

# print("Reversed string:", reversed_string)



#Task 23
```

```
# my_string = "hello"

# # Removing spaces and converting to lowercase for a case-insensitive check
# cleaned_string = my_string.replace(" ", "").lower()

# # Checking if the string is the same forwards and backwards
# if cleaned_string == cleaned_string[::-1]:
#     print(f'"{my_string}" is a palindrome.')
# else:
#     print(f'"{my_string}" is not a palindrome.')

#Task 24

# Input string
# my_string = "Hello, how are you today?"

# # Convert to lowercase for easy comparison
# my_string = my_string.lower()

# # Define vowels
# vowels = "aeiou"

# # Initialize counters
# word_count = 1 if my_string.strip() else 0  # Start with 1 word if string is not empty
# vowel_count = 0
# consonant_count = 0

# # Iterate through each character in the string
# for i in range(len(my_string)):
```

```
#     char = my_string[i]

#     # Count words (words are separated by spaces)
#     if char == " " and my_string[i - 1] != " ":  # Avoid multiple spaces being counted
#         word_count += 1

#     # Count vowels and consonants
#     if char in vowels:
#         vowel_count += 1
#     elif char.isalpha():  # If it's a letter but not a vowel, it's a consonant
#         consonant_count += 1

# print("Number of words:", word_count)
# print("Number of vowels:", vowel_count)
# print("Number of consonants:", consonant_count)



#Task 25

# Input string
# my_string = "Hello world, how are you?"
# print("Original String:", my_string)

# # Convert string with manual replacement
# new_string = ""

# for char in my_string:
#     if char == " ":
#         new_string += "_"  # Replace space with underscore
```

```
#     else:
#         new_string += char  # Keep other characters unchanged

# # Output the modified string
# print("Modified String:", new_string)



#task 26:
# def square(n):
#     return n*n
# print(square(3))



#  #task 27:
# def check_even_odd(n):
#     if(n%2==0):
#         print(n," is a Even Number")
#     else:
#         print(n," is a Odd number")
# check_even_odd(8)

# #Task 28

# def factorial(n):
#     if n==0:
#         return 1
#     else:
#          multi=1
#          for i in range(1,n+1):
```

```
#             multi*=i
#     return multi
# print("factorial of given number is: ", factorial(0))



#Task 29:
# def check_palindrome(str):
#     cleaned_string = str.replace(" ", "").lower()
#     # Checking if the string is the same forwards and backwards
#     if cleaned_string == cleaned_string[::-1]:
#         print(f'"{str}" is a palindrome.')
#     else:
#         print(f'"{str}" is not a palindrome.')

# check_palindrome("radar")



#Task 30
# def max(a,b,c):
#     if a>b and a>c:
#         print(a," is a greater number")
#     elif b>a and b>c:
#         print(b," is a greater number")
#     else:
#         print(c, " is a greater number")

# max(90,89,45)

#Task 31  Dictionaries
```

```
# dict={
#     "Mark1": 98,
#      "Mark2": 70,
#      "Mark3":86,
#      "Mark4":98,
#      "Mark5":95,



# }

# print(dict)
# print(dict["Mark1"])

# # Task32

# dict["Mark1"]=78
# print(dict["Mark1"])

# print(dict)

# #Task 33
# maximum=(max(dict,key=dict.get))
# print(dict[maximum])

# #Task 34

# my_string = "apple banana apple orange banana apple orange orange"
```

```
# # Convert to lowercase to avoid case-sensitive differences
# my_string = my_string.lower()

# # Split the string into words
# words = my_string.split()

# # Initialize an empty dictionary to store word counts
# word_count = {}

# for word in words:
#     if word in word_count:
#         word_count[word] += 1
#     else:
#         word_count[word] = 1

# print("Word occurrences:", word_count)
```