```
# hi, how may i help you ?
# i'm the chatbot to help you out..
# user1

print('hi, how may i help you ?')
print('i\'m the chatbot to help you out..')
```

```
hi, how may i help you ?
i'm the chatbot to help you out..
```

```
# function => it is a block of reuseable code .. whenever there is need that
# task we call that function..

#  on the time of function definition we give the parameters which are being
# used into the function...

# def keyword is used to define the function
# (parameters) -> def function_name(parameters):
#                                  particular task/specific task

def coffee_machine(sugar, milk, beans):
  #  prepare beans
  print('preparing beans..')
  # taking milk
  print('mixing coffee with the milk')
  # coffee is ready
  print('your coffee is ready...')

# Calling function -> at the time of calling the function with the function name
# we pass the values at that and that values are known arguments.
coffee_machine('sugar','milk','beans')
```

```
preparing beans..
mixing coffee with the milk
your coffee is ready...
```

```
def greeting_msg():
  return'hello, there .. this is chatbot app..'

print(greeting_msg())
```

```
hello, there .. this is chatbot app..
```

```
def add(a,b):
  # return keyword is used to return the value
  return a+b
  #  when we are calling the function this return a value.. stored into
  # the variable sum
# which we can use anywhere in our program
sum = add(3,4)
print(sum)

# ( the sum is a+b)
```

```
7
```

```
# write a program to make a calculator
# add, sub,multiplication, division
#  the sum is,sum


def add(a,b):
  return a+b

def sub(a,b):
  return a-b

def mul(a,b):
  return a*b

def div(a,b):
  if b==0:
    return 'not defined'
  else:
    return a/b

a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
```

```
print("1. Addition")
print("2. Subtraction")
print("3. Multiplication")
print("4. Division")

choice = int(input("Enter your choice: "))

if choice == 1:
    print("The sum is:", add(a, b))

elif choice == 2:
    print("The subtraction is:", sub(a, b))

elif choice == 3:
    print("The multiplication is:", mul(a, b))

elif choice == 4:
    print("The division is:", div(a, b))

else:
    print("Invalid choice")
```

```
Enter first number: 4
Enter second number: 8
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter your choice: 3
The multiplication is: 32
```

```
# positional arguments
# default keyword arguments
# variable length keyword argument
# local and global variables
# nested function

# today
# function?
# definition,function calling, parameter and arguments, return statement
```

```
# default argument:
def greeting(name = 'USER'):
    return(f"Hello {name}, how may I help you?")

name = input('enter your name : ')
message = greeting(name)
print(f'Ui , {message}')
print(f'dashboard {message}')
# default argument : into this argument we basically pass the default value with parameter.
```

```
enter your name : deepak
Ui , Hello deepak, how may I help you?
dashboard Hello deepak, how may I help you?
```

```
# positional argument :
def show_details(name , location):
  return f'hello , I am {name}. I belongs from {location}'

show_details('deepak','jaipur')
# positional argument : arguments which are passed at the function calling.
# in that position in which the parameters are defined.
```

```
'hello , I am deepak. I belongs from jaipur'
```

```
# KEYWORD ARGUMENT :
def show_details(name , location):
  return f'hello , I am {name}. I belongs from {location}'

name = input('enter your name : ')
location = input('enter your location : ')
show_details(location = location , name = name)
# KEYWORD ARGUMENT : at the time of function calling we pass value with parameter name -> 'value'
```

```
enter your name : deepak
enter your location : jaipur
'hello , I am deepak. I belongs from jaipur'
```

```
# question : write a function student_info(name,age,city) print all the info
# age , city not passing
def student_info(name, age , city):
  print(f'hello , my name is {name}.and I am {age} year old . I belongs to {city}')
student_info('deepak',20,'jaipur')
```

```
hello , my name is deepak.and I am 20 year old . I belongs to jaipur
```

```
# write a function area(length , width)width default= 5
def area(length, width=5):
    return length * width
area(10)
```

```
50
```

```
# write a function to display the details of the employee
# name , dept , salary
# call it using the positional argument as well as
def employee_details(name, dept, salary):
    print("Employee Name:", name)
    print("Department:", dept)
    print("Salary:", salary)

employee_details('deepak','IT','salary')
```

```
Employee Name: deepak
Department: IT
Salary: salary
```

```
# GLOBAL VARIABLE -> which is accessible inside or outside of the function you can use this variable
# anywhere into the program.
# if you want to the value of the global var then use the 'global' keyword
# to access that variable
var = 1
def count():
  # local variable is accessible only inside the function .. we can't use this outside the function
  var1 = 2
  # here we're accessing the global variable to change the value of that
  # variable inside the function..
  global var
  var = 20
count()
print(var)
```

```
20
```

```
# write a program to change the counter value of the global variable
count = 0
def change_count():
  global count
  count += 1
  print(count)

change_count()
change_count()
change_count()
```

```
1
2
3
```