

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is light green. Both are tilted at an angle. The background of the entire slide is dark blue with faint, larger-scale geometric patterns.

# Functions

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# Functions in Python

- A function accepts input arguments and produces an output by executing valid commands present in the function
- Function name and file names need not be the same
- A file can have one or more functions definitions
- Functions are created using the command `def` and a colon with the statements to be executed indented as a block
- Since statements are not demarcated explicitly, it is essential to follow correct indentation practises



# Function with multiple inputs and outputs

- Function with multiple inputs and outputs
  - Functions in Python takes multiple input objects but return only one object as output
  - However lists, tuples or dictionaries can be used to return multiple outputs as required.



# Function Definition

```
def function_name():
```

```
    statements
```

```
def function_name(parameters):
```

```
    statements
```

```
def function_name(arg1,arg2, ...):
```

```
    statements
```



# Advantages

Allows code to be used and re-used at different times when running the program

It makes the program simpler to understand as the code is grouped together into modules or chunks.



# Defining A Function

```
def get_name():  
    user_name = input("Enter your name: ")  
    return user_name  
  
def print_Msg(user_name):  
    print("Hello", user_name)  
  
def main():  
    user_name = get_name()  
    print_Msg(user_name)  
  
main()
```



# Function Con't

- A function contains a header and body.
- The header begins with the `def` keyword, followed by the function's name and parameters, and ends with a colon.
- The variables in the function header are known as formal parameters or simply parameters.
- A parameter is like a placeholder: When a function is invoked, you pass a value to the parameter.
- This value is referred to as an actual parameter or argument. Parameters are optional; that is, a function may not have any parameters.