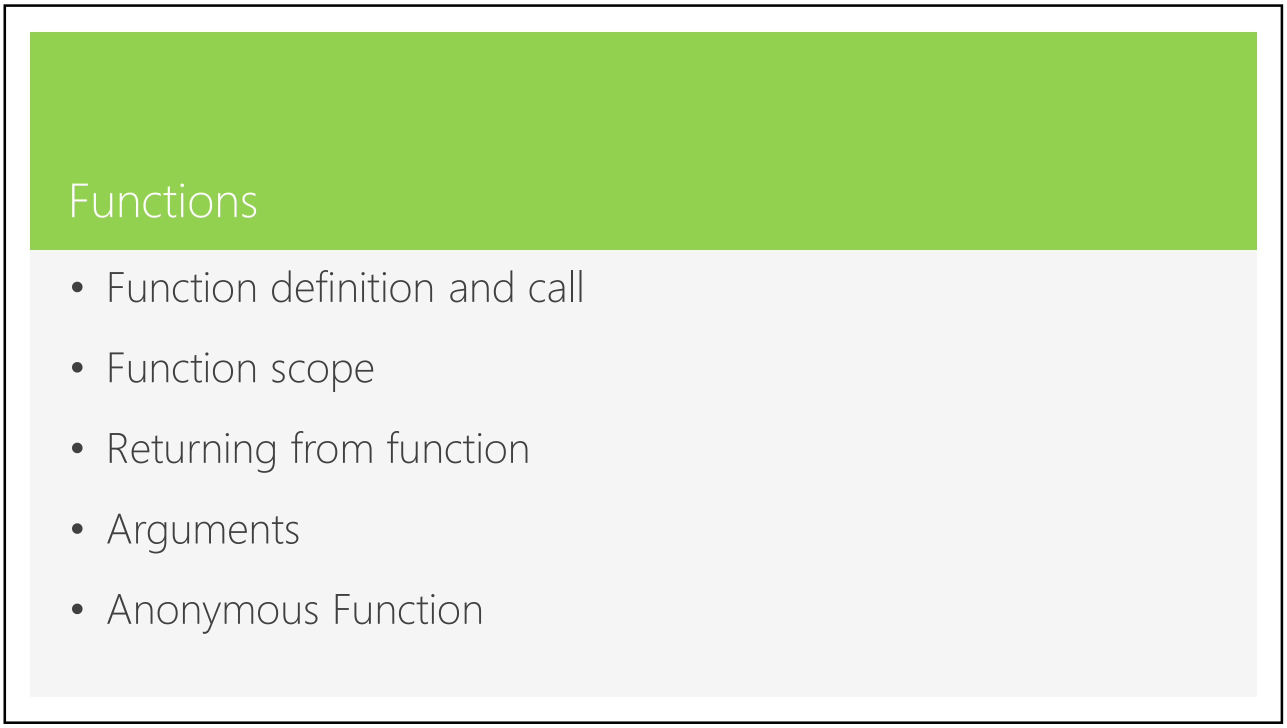
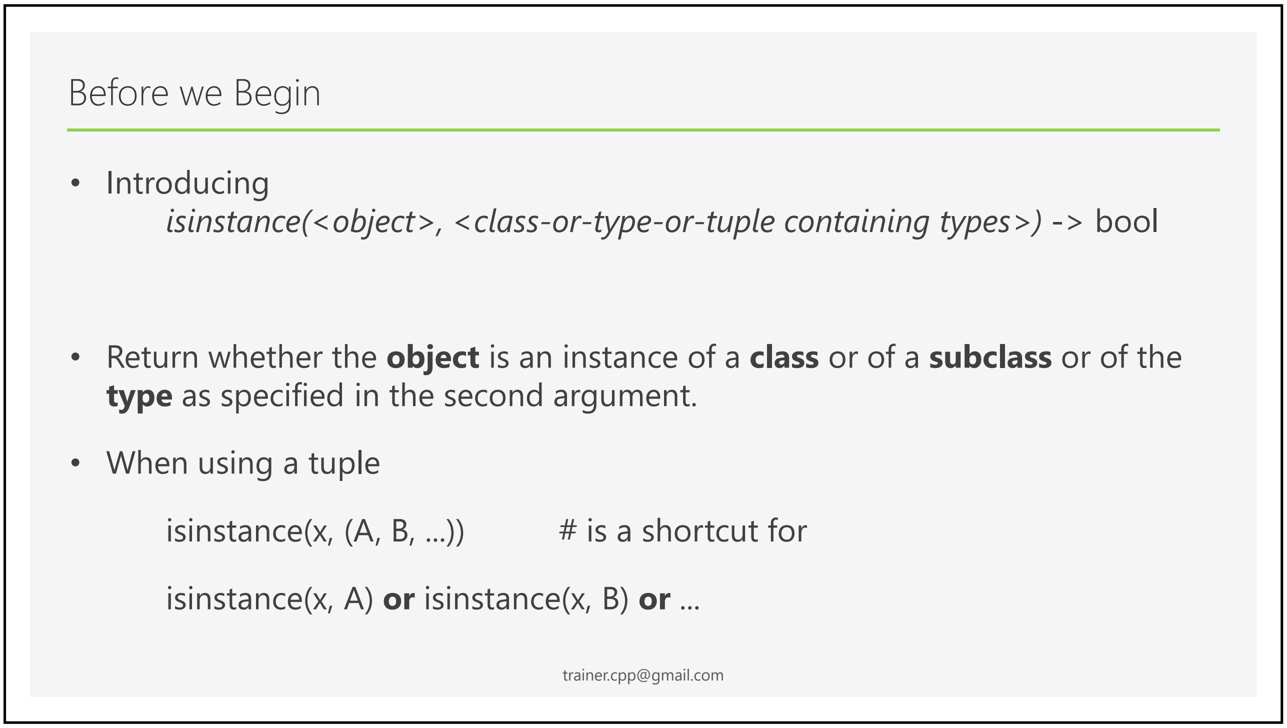


Functions

- Function definition and call
- Function scope
- Returning from function
- Arguments
- Anonymous Function



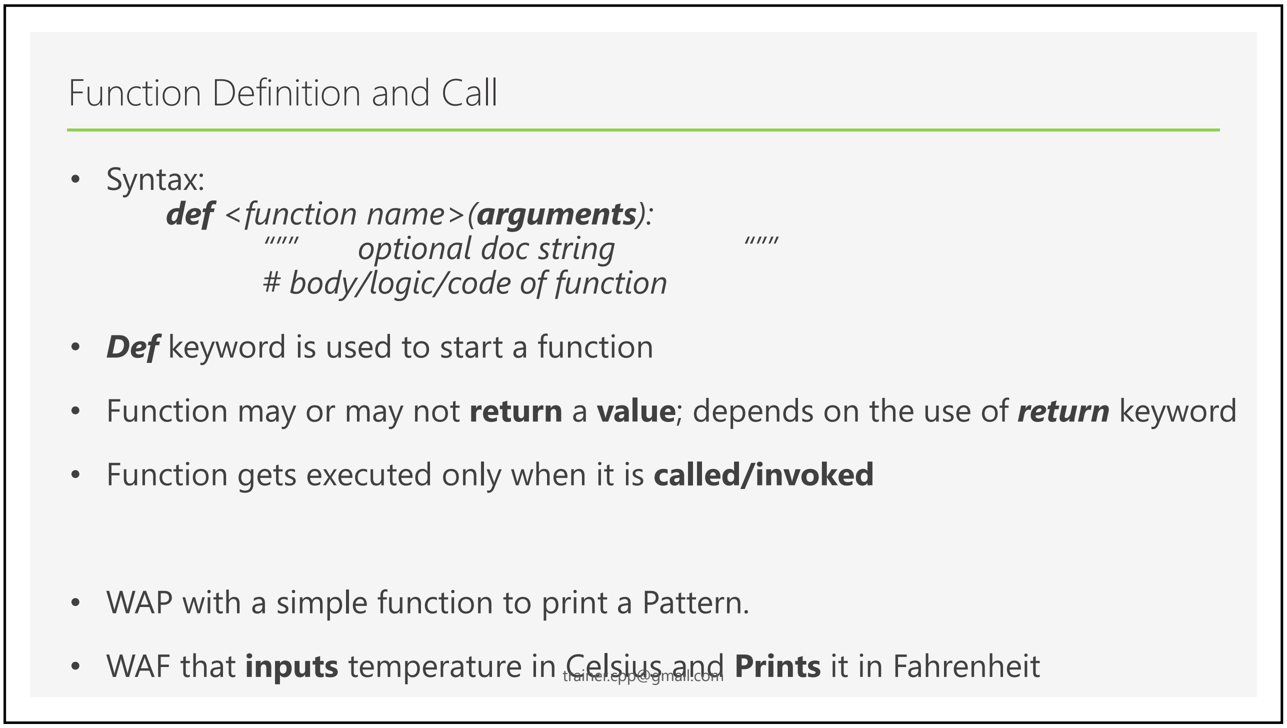
Before we Begin

- Introducing
  isinstance(<object>, <class-or-type-or-tuple containing types>) -> bool
- Return whether the **object** is an instance of a **class** or of a **subclass** or of the **type** as specified in the second argument.
- When using a tuple

  isinstance(x, (A, B, ...))   # is a shortcut for

  isinstance(x, A) **or** isinstance(x, B) **or** ...

trainer.cpp@gmail.com

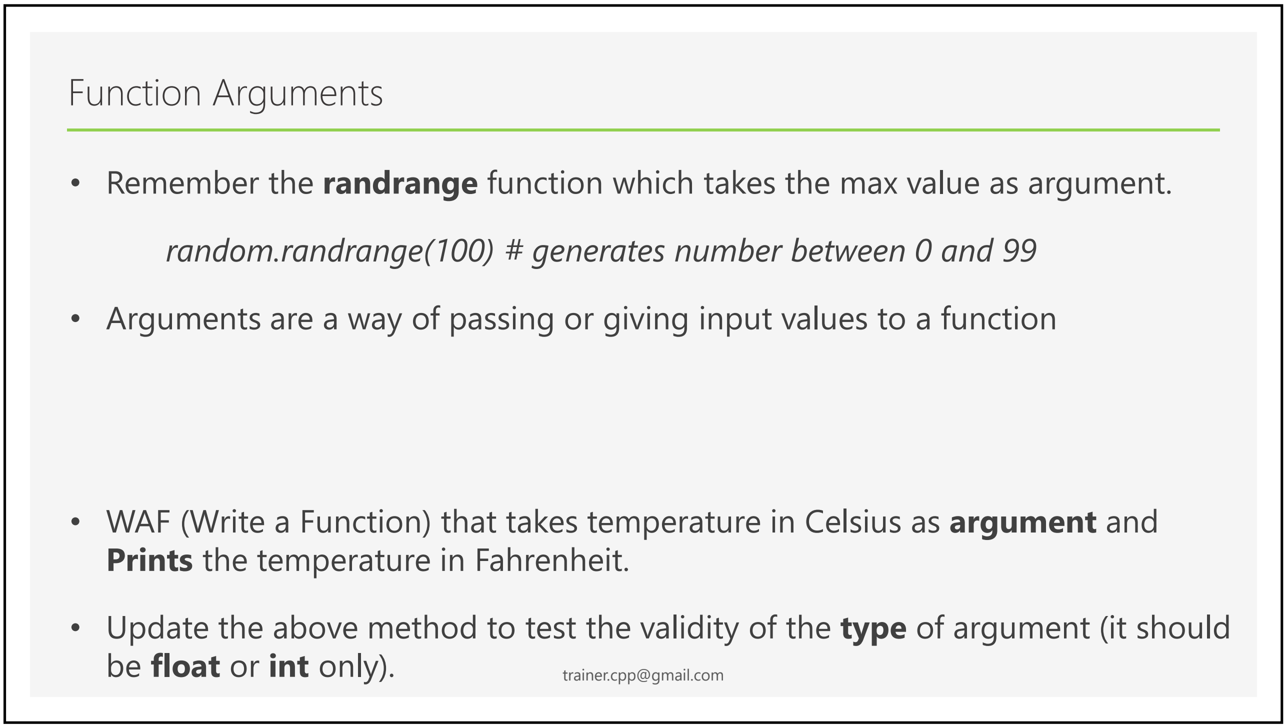


Function Definition and Call

- Syntax:

```
    def <function name>(arguments):
        """     optional doc string          """
        # body/logic/code of function
```

- ***Def*** keyword is used to start a function
- Function may or may not **return** a **value**; depends on the use of ***return*** keyword
- Function gets executed only when it is **called/invoked**
- WAP with a simple function to print a Pattern.
- WAF that **inputs** temperature in Celsius and **Prints** it in Fahrenheit

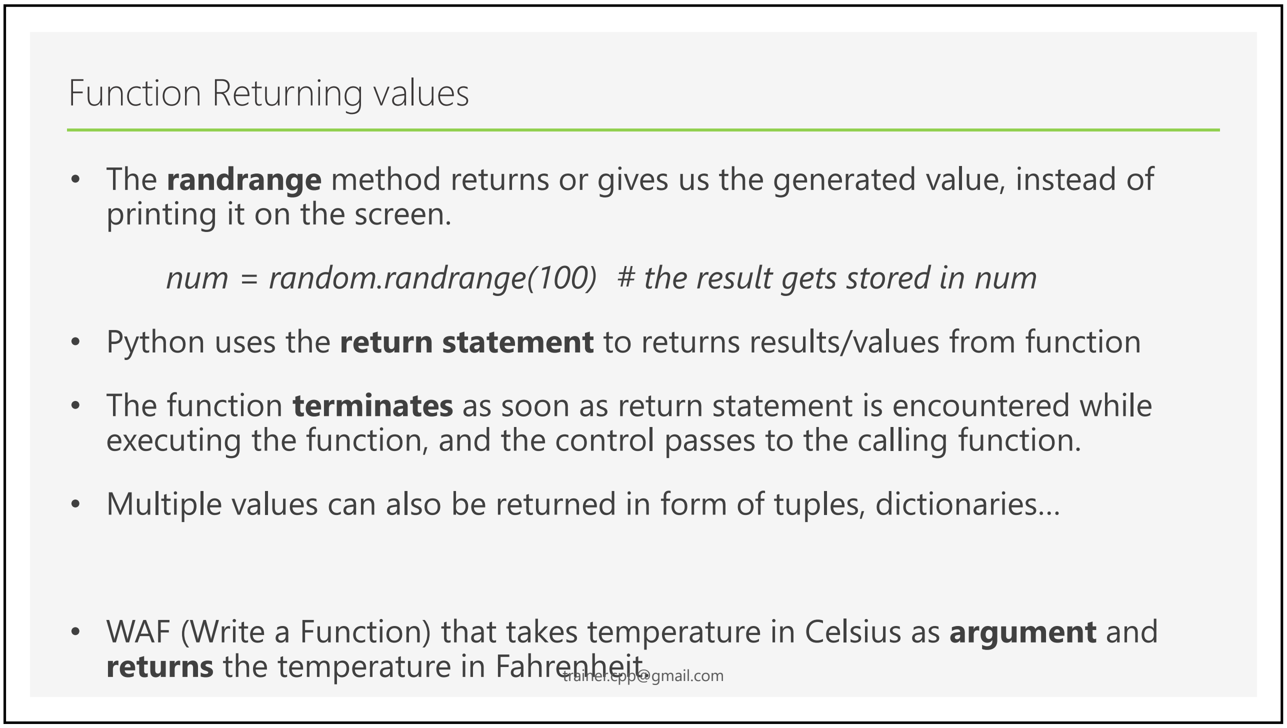


Function Arguments

- Remember the **randrange** function which takes the max value as argument.

  random.randrange(100) # generates number between 0 and 99

- Arguments are a way of passing or giving input values to a function
- WAF (Write a Function) that takes temperature in Celsius as **argument** and **Prints** the temperature in Fahrenheit.
- Update the above method to test the validity of the **type** of argument (it should be **float** or **int** only).



Function Returning values

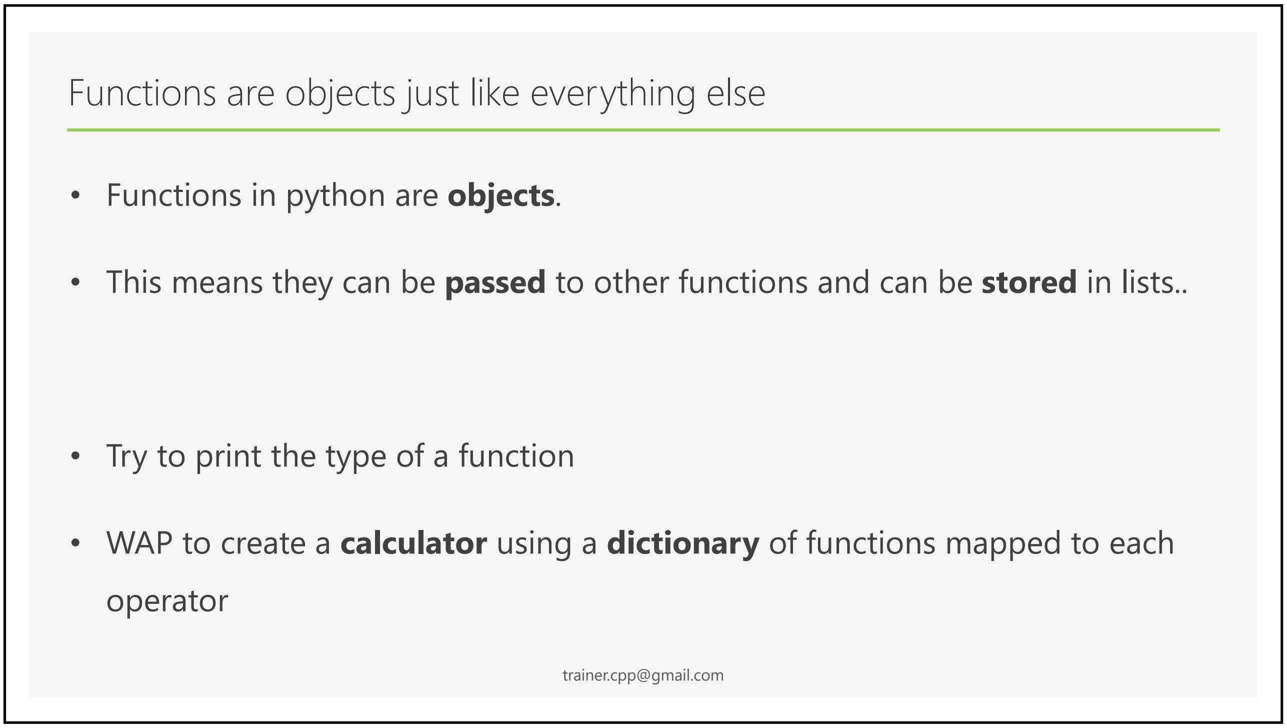
- The **randrange** method returns or gives us the generated value, instead of printing it on the screen.

  num = random.randrange(100) # the result gets stored in num

- Python uses the **return statement** to returns results/values from function
- The function **terminates** as soon as return statement is encountered while executing the function, and the control passes to the calling function.
- Multiple values can also be returned in form of tuples, dictionaries…

- WAF (Write a Function) that takes temperature in Celsius as **argument** and **returns** the temperature in Fahrenheit

trainer.cpp@gmail.com



Functions are objects just like everything else

- Functions in python are **objects**.
- This means they can be **passed** to other functions and can be **stored** in lists..

- Try to print the type of a function
- WAP to create a **calculator** using a **dictionary** of functions mapped to each operator

trainer.cpp@gmail.com