**Theory:**

**• Defining and calling functions in Python.**

**• Function arguments (positional, keyword, default).**

**• Scope of variables in Python.**

**• Built-in methods for strings, lists, etc.**

**Defining and Calling Functions in Python**

* **Defining Functions**: Functions are defined using the def keyword, followed by the function name and parentheses. The function body contains the code that will be executed when the function is called.
* **Calling Functions**: A function is called by using its name followed by parentheses. If the function has arguments, values must be passed inside the parentheses.

**Function Arguments**

* **Positional Arguments**: These are arguments that need to be passed in a specific order.
* **Keyword Arguments**: These are arguments that are passed with a name (e.g., name="John"), allowing them to be in any order.
* **Default Arguments**: These arguments have a default value if no value is provided during the function call.

**Scope of Variables in Python**

* **Local Scope**: Variables declared inside a function are local to that function and cannot be accessed outside.
* **Global Scope**: Variables declared outside of all functions are global and can be accessed by any function within the program.
* **Nonlocal Scope**: Variables declared in the nearest enclosing function, but not global, can be accessed and modified in a nested function.

**Built-in Methods for Strings, Lists, etc.**

* **Strings**:
  + .lower(), .upper(): Convert string to lowercase or uppercase.
  + .split(): Split a string into a list based on a separator.
  + .replace(): Replace occurrences of a substring with another string.
* **Lists**:
  + .append(): Add an item to the end of the list.
  + .remove(): Remove the first occurrence of an item.
  + .sort(): Sort the list in ascending order.
  + .pop(): Remove and return an item from a specified index.