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| **Course code and Title : BCSE101E – Computer Programming: Python**  **Lab student exercise – 1 (Solutions)** | |
| **Student Name :A Aswanth Raj** | **Given Date : 31.07.2024** |
| **Register no: 24BAI0044** | **Submitted Date :** |
| **Topics:**   1. Boolean Data Types Exercise 2. Basic List Operations 3. List Slicing and Iteration 4. List Methods and Functions 5. Basic String Operations 6. Advanced String Operations | |

Solutions:

**Exercise -1: Boolean Data Types**

**Objective:** Understand and use Boolean data types, Boolean expressions, and logical operators (and, or, not) in Python.

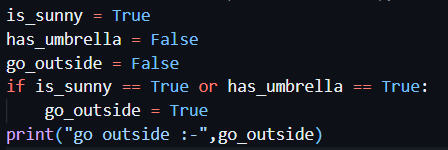
1. Boolean Variables:

Code:



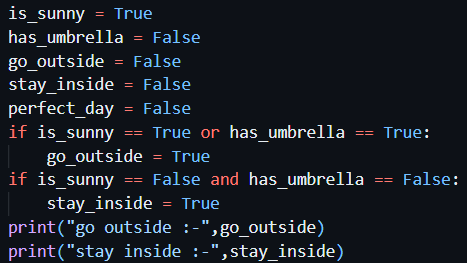
1. Boolean Expressions:

Code:



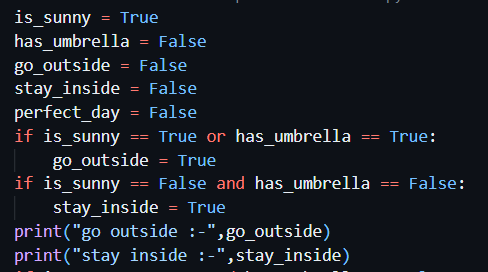
1. Logical operators:

Code:

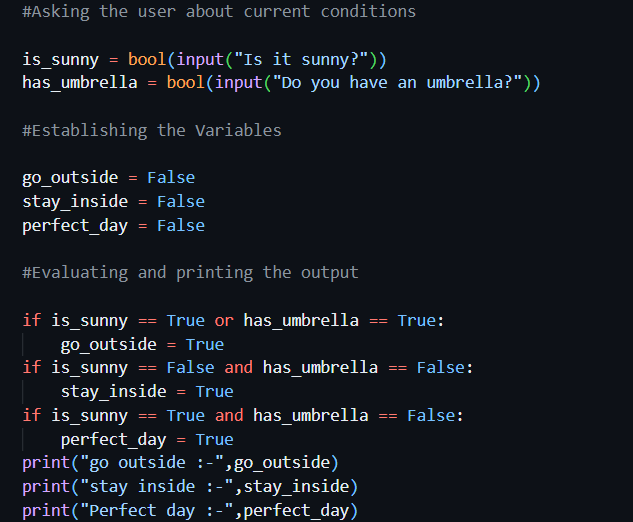


1. Combining conditions:

Code:

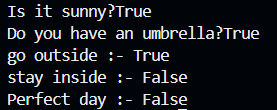


1. Interactive input:

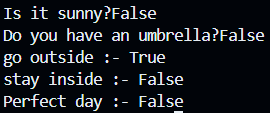
Code: 

**Final Outputs:-**

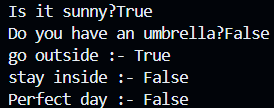
**1**

****

**2**

****

**3**

****

**Exercise-2: Basic list operations**

**Objective:** Understand basic list operations such as creating lists, accessing elements, and modifying lists.

1. Creating list:

Code:



1. Accessing elements:

Code:

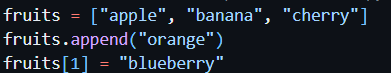


Output:



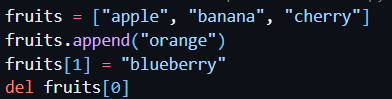
1. Modifying a list:

Code:



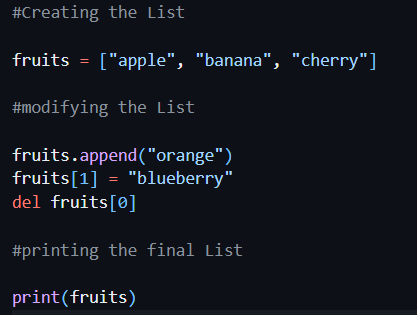
1. Removing elements:

Code:



1. Print the final list:

Code:



Output:



**Exercise-3**: **List Slicing and Indexing**

**Objective:** Practice list slicing and iterating through list elements.

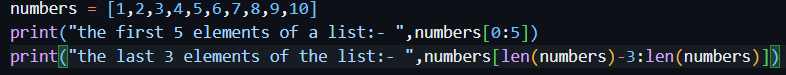
1. Creating a List:

Code:



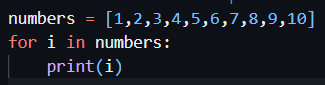
1. Slicing a List:

Code:

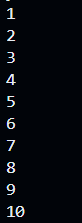


1. Iterating Through a List:

Code:



Output:



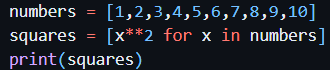
1. List Comprehension

Code:



1. Print the new List

Code:



Output:



**Exercise-4: List Methods and Functions**

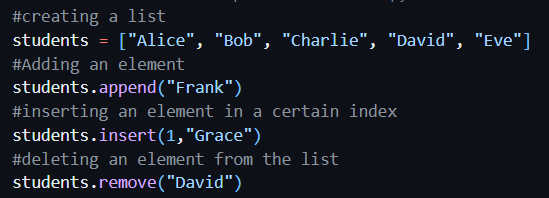
**Objective:** Understand and use various list methods and built-in functions.

1. Creating a List:

Code: 

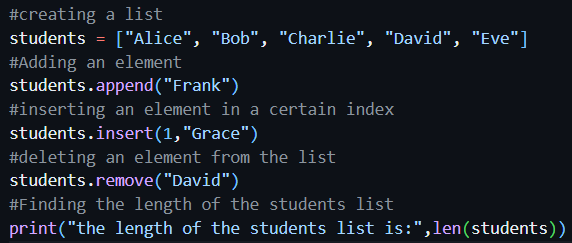
1. Using List Methods:

Code:



1. Using built in functions:

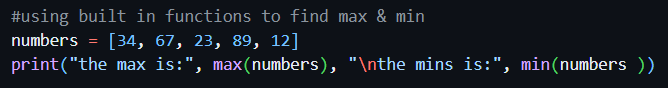
Code:



Output:



Code:

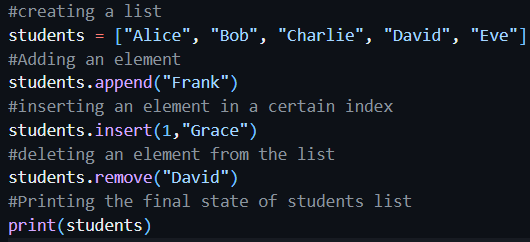


Output:



1. Print the Final List:

Code:



Output:

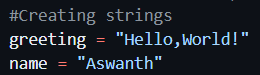


**Exercise-5: Basic string operations**

**Objective:** Understand basic string operations such as creating strings, accessing characters, and modifying strings.

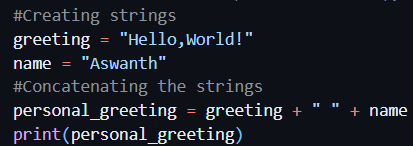
1. Creating Strings:

Code:

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1. String concatenation:

Code:

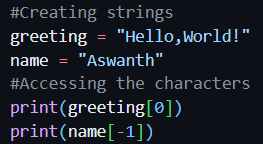


Output:

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1. Accessing characters:

Code:

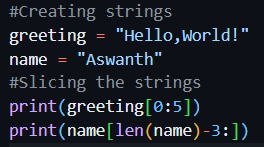


Output:



1. String slicing:

Code:

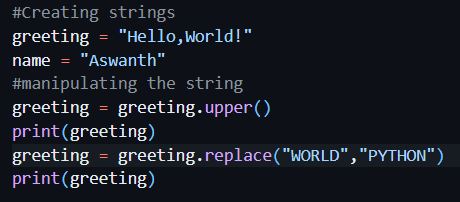


Output:



1. String methods:

Code:



Output:

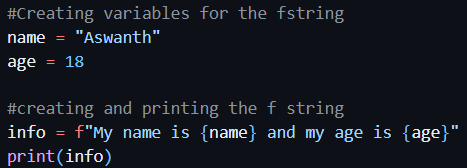


**Exercise-6: Advanced string operations**

**Objective:** Practice more advanced string operations such as formatting, finding substrings, and splitting/joining strings.

1. String Formatting:

Code:

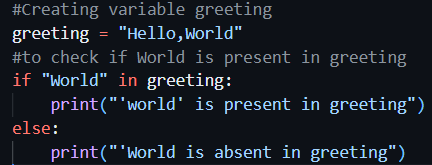


Output:



1. Finding substrings:

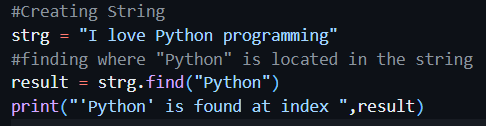
Code:



Output:



Code2:

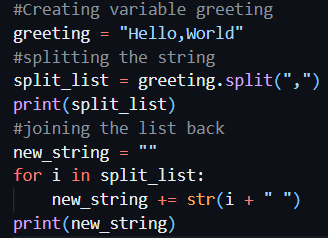


Output:



1. Splitting and joining strings

Code:

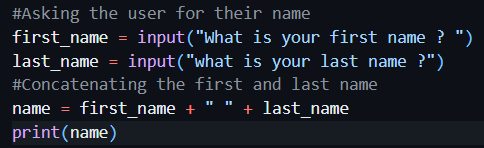


Output:



1. Interactive Input:

Code:



Output:

