Python: Language Basics

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- To access the updated handouts, please click on the following link: https://yasirbhutta.github.io/ms-excel/docs/basics.html

[Language Introduction]

- Python is a high-level, general-purpose programming language.
- It is known for its clear syntax, readability, and versatility.
- Python is widely used for `web development`, `data science`, `machine learning`, and `automation`.

Python source code

How To Use Print() Function in Python

- The print() function is one of the most fundamental and versatile functions in Python.
- It is used to display text to the console, or to a file. The print() function can take one or more arguments, and it can be used to format text in a variety of ways.

Here is the basic syntax of the print() function:

```
print(object1, object2, ..., sep=' ', end='\n', file=sys.stdout, flush=False)
```

object1, object2, ...: The objects to be printed. These can be strings, numbers, variables, or any other Python object. sep: The separator to use between objects. The default separator is a space. end: The character or string to print at the end of the output. The default is a newline character (\n). file: The file to write the output to. The default is the console. flush: Whether to flush the output buffer immediately. The default is False.

Video: Use of print() function in python

Example 1

```
message = 'Python is fun'

# print the string message
print(message)
```

Output:

```
Python is fun
```

Example 2

```
# Print a string:
print("Hello, World!")

# Print a number:
print(10)

# Print a variable:
x = 5
print(x)

# Print multiple objects on the same line:
print("Hello", "World")

# Print multiple objects on separate lines:
print("Hello")
print("World")

# Print with a custom separator:
print("Hello", "World", sep=", ")

# Print with a custom ending character:
print("Hello", "World", end="!")

# Print to a file:
with open("output.txt", "w") as f:
    print("Hello, World!", file=f)
```

See also:

- Python Tutorial: How to print multiple lines
- Python Tutorial: 100 times "hello world" without loop

Comments

- Comments in Python are non-executable lines of code that are used to explain or document the code.
- They are ignored by the Python interpreter when the code is executed.
- Comments are important for making code more readable and understandable, especially for other programmers who may need to read or modify the code.

There are two main types of comments in Python:

- **Single-line comments:** These comments start with the hash symbol (#) and extend to the end of the line.

```python
# This is a single-line comment
print("Hello, World!")
```

- **Multi-line comments:** These comments are enclosed in triple quotes (""" or ''').

```python
"""
This is a multi-line comment.
It can span multiple lines of code.
"""
print("Hello, World!")
```

See also:

- Python Tutorial: A Comprehensive Guide to Single Line & Multi-Line Comments

Indentation

[Variables and Assignments]

Tuple example1, example2

User-defined Functions

Code Checked at Runtime

Variable Names

More on Modules and their Namespaces

Online help, help(), and dir()

True/False (Mark T for True and F for False)

Multiple Choice (Select the best answer)

Exercises

Review Questions

References and Bibliography