**AI Day 01 Notes**

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**Shortcut for Running Code (F3):**

* In Jupyter Notebook, press F3 (or Ctrl+Enter) to execute the selected cell(s) of code.

**Theme Selection (Monokai):**

* Access the "Kernel" menu (usually top-right) and navigate to "Change theme" for customization options. The Monokai theme is a popular choice for its clear and concise visual style.

**Hello World Program:**

print("Hello World!")

* This classic program outputs "Hello World!" to the console.
* The print function displays values passed to it.

**Multiple Values in Output (print Function):**

print("Hello", 5, 6.78, sep=", ")

* Use the sep argument in print to specify a separator between elements. Here, ", " separates values with commas and spaces.

**New Line and Comments:**

* \n (newline) creates a new line in the output.
* Single line comments: # Your comment here
* Multi-line comments: Use triple quotes (''' or """).

**Variables and Data Types:**

* Variables store data with a specific name for reference.
* Data types define the kind of data a variable holds (e.g., numbers, text).

**Variable Creation and Data Types:**

a = 1  # Integer (int)  
b = True  # Boolean  
c = "Hello"  # String  
d = None  # None (special data type)  
e = 3.14  # Float (decimal number)  
f = complex(2, 3)  # Complex number (real + imaginary parts)  
g = [1, 2.5, "Cat"]  # List (ordered collection of elements)  
h = ("Dog", "Bird")  # Tuple (immutable ordered collection)  
i = {"name": "Alice", "age": 30}  # Dictionary (unordered key-value pairs)

**Type Function:**

print(type(a))  # Output: <class 'int'>

**Built-in Data Types:**

* **Numbers:**
* int: Integers (whole numbers)
* float: Floating-point numbers (decimals)
* complex: Complex numbers (real + imaginary parts)
* **Collections:**
* list: Ordered, changeable collection of elements (can hold mixed data types)
* tuple: Ordered, immutable collection of elements (can hold mixed data types)
* set: Unordered collection of unique elements (removes duplicates)
* dictionary: Unordered collection of key-value pairs (flexible data storage)