Ms. Terkper's Digital Classroom

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Introduction to Python: Basics #1

Introduction to Python - Basics #1

Python is a high-level, beginner-friendly programming language used in robotics, automation, game development, and artificial intelligence. It is known for its **simple and readable syntax**, making it a great first language for learning programming.

1. Printing Output in Python

One of the first things you'll do in Python is **display text on the screen** using the print() function.

```
print("Hello, World!")
```

Output:

Hello, World!

- print() is used to display messages in Python.
- Text must be inside quotation marks (" " or ' ').

• Every statement in Python runs from top to bottom.

2. Taking User Input

Python allows users to **enter data** using the <code>input()</code> function:

```
name = input("Enter your name: ")
print("Hello, " + name + "!")
```

Example Output: If the user types Hannah, the output will be:

```
Hello, Hannah!
```

- The input() function takes user input as a string.
- We can use + to **concatenate** (join) text together.

3. Variables and Data Types

In Python, a **variable** is used to store values, such as numbers or text:

```
age = 15
height = 5.7
name = "Hannah"
```

Common Data Types:

- int \rightarrow Whole numbers (e.g., 10, 25, 42).
- float \rightarrow Decimal numbers (e.g., 3.14, 7.89).
- $str \rightarrow Text$ (e.g., "Hello", "Python").
- **bool** \rightarrow True/False values (e.g., True, False).

4. Type Conversion

When using input(), Python always treats the input as a **string**. To use numbers, we need to convert the type:

```
age = input("Enter your age: ") # Input is stored as a string
age = int(age) # Convert to integer
print("Next year, you will be " + str(age + 1) + " years old!")
```

- int() → Converts a string to an integer.
- float() → Converts a string to a decimal number.
- str() → Converts numbers back to text.

Now that you've learned the basics, try answering the questions below! 1. What will the following code output? print("Hello, World!") A. Hello, World! B. hello world ○ C. "Hello, World!" O. An error Submit

2. Which function allows a user to enter input in Python?

- A. print()
- B. input()
- C. get()
- D. scan()

Submit

✓ Correct! Well done!

Correct! Well done!

Correct! Well done! 4. What will the following code output? name = "Alex" print(name) A. Alex B. "name" C. name D. Nothing Submit Correct! Well done! 5. What data type is stored in the variable `user_age`? A. int B. float C. string D. boolean Submit Correct! Well done!	 3. Which of the following correctly stores user input in a variable? A. name = input() B. input(name) C. name == input() D. print(input(name)) Submit 		
name = "Alex" print(name) A. Alex B. "name" C. name D. Nothing Submit Correct! Well done! 5. What data type is stored in the variable `user_age`? A. int B. float C. string D. boolean Submit	✓ Correct! Well done!		
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 ♠ A. Alex ♠ B. "name" ♠ C. name ♠ D. Nothing Submit ✔ Correct! Well done! 5. What data type is stored in the variable `user_age`? ♠ A. int ♠ B. float ♠ C. string ♠ D. boolean Submit 	4. What will the following code output?		
 ○ B. "name" ○ C. name ○ D. Nothing Submit ✓ Correct! Well done! 5. What data type is stored in the variable `user_age`? ○ A. int ○ B. float ○ C. string ○ D. boolean Submit 			
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 A. int B. float C. string D. boolean Submit 	✓ Correct! Well done!		
 A. int B. float C. string D. boolean Submit 			
B. floatC. stringD. booleanSubmit	5. What data type is stored in the variable `user_age`?		
C. stringD. booleanSubmit			
O D. boolean Submit			
Submit	*		
✓ Correct! Well done!			
	✓ Correct! Well done!		

 6. What symbol is used for writing comments in Python? ○ A. // ○ B. # ○ C. ○ D. ** 			
Submit Correct! Well done!			
7. Which of the following is a valid variable name in Python?			
○ A. 1stName			
B. first_name			
○ C. first-name			
O. print Submit			
✓ Correct! Well done!			
8. How do you convert user input to an integer in Python?			
<pre>A. str(input())</pre>			
B. int(input())			
○ C. input(int)			
O. input().int()			
Submit			
Correct! Well done!			
9. What happens if you try to add an integer and a string in Python?			
 ○ A. The numbers will be added together. 			
B. The string will be converted to a number.			

D. The	C. An error will occur.		
	string and number will be printed together.		
Submit			
Corre	ct! Well done!		
	will happen if you forget parentheses in `print "Hello"`?		
	I print "Hello" correctly.		
	I print `Hello` without quotes.		
	I cause a syntax error.		
Submit	I automatically correct the mistake.		
Corre	ct! Well done!		

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