Introduction to Python: Basics #1

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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 `input()` 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`** → Whole numbers (e.g., `10`, `25`, `42`).
- **`float`** → Decimal numbers (e.g., `3.14`, `7.89`).
- **`str`** → Text (e.g., `"Hello"`, `"Python"`).
- **`bool`** → 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 stri
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!"
- ( ) D. An error

Submit

Correct! Well done!

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

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

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

✅ **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!

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
- ( ) D. print

Submit

Correct! Well done!

8. How do you convert user input to an integer in Python?

- ( ) A. str(input())
- (●) B. int(input())
- ( ) C. input(int)
- ( ) D. 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.
- C. An error will occur.
- D. The string and number will be printed together.

Submit

Correct! Well done!

10. What will happen if you forget parentheses in `print "Hello"`?

- A. It will print "Hello" correctly.
- B. It will print `Hello` without quotes.
- C. It will cause a syntax error.
- D. It will automatically correct the mistake.

Submit

☑ **Correct! Well done!**

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