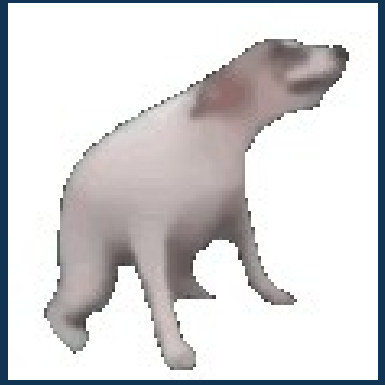
Welcome to the Data Types Lecture



The session will start shortly...

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Johannesburg Team Housekeeping

- Please be mindful and respectful to everyone in this supportive learning environment. Mutual respect and tolerance are fundamental values we uphold.
- There are no bad or silly questions—feel free to ask anything! You can ask Sashlin or myself questions at any time, regardless of the situation. Even if you find yourself in a dire situation—like stuck in quicksand—you're still welcome to ask us a question (though we recommend calling or shouting first!).
- A few additional reminders for onsite behavior:
  - Keep shared spaces tidy—clean up after yourself in the break areas.
  - Please mute your devices during sessions to minimize distractions.
  - Avoid making personal phone calls in common areas—use designated quiet zones if you need to step away.
- Additionally, please remember to put any dishes in the sink before 2 p.m., as Lizbeth will have already finished for the day. If you’re feeling unwell, kindly inform Ingrid or myself via email.

Why Are Data Types Important?

- Data types determine what kind of information you can store in variables.
- Different programs require different types of data:
  - Calculator apps need numbers (integers, floats).
  - Search engines deal with words and phrases (strings).

Basic Python Data Types

- Integer (int):
  - Whole numbers (e.g., 1, 5, -10)
- Float:
  - Decimal numbers (e.g., 3.14, -7.5)
- String (str):
  - Text (e.g., "Hello", "Python123")
- Boolean (bool):
  - True/False values

Simple Example of Each Data Type

```
age = 18  # Integer
pi = 3.14  # Float
name = "Alex"  # String
is_hungry = True  # Boolean
```

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Why Choosing the Right Data Type Matters

- **Efficiency**: Integers take up less space than strings for numbers.
- **Accuracy**: Floats are used when precise decimal values are needed.
- **Code Readability**: Using the correct type makes code easier to understand.

Q & A SECTION

Test Your Knowledge
Before we move over to the recap

Key Takeaways

- Variables are fundamental for storing data in your programs.
- Good variable names make your code easier to understand and maintain.
- Constants help communicate the idea that certain values shouldn't change throughout your program.

Thank you for attending