



Introduction to Python

Fun with Coding!

Robogen

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Workshop Overview

6-Day Workshop:

- Day 1: Python Basics
- Day 2: Fun with AI
- Day 3: Prompt Engineering
- Day 4: Robotics Basics
- Day 5: ATL Challenge
- Day 6: Final Project

Tools: Google Colab (<https://colab.research.google.com>)

What is Python?

- Simple programming language
- Used for games, websites, AI
- Named after Monty Python

Why Learn Python?

- Easy to read and write
- Used by Google, NASA
- Great for beginners

How to Use:

- 1 Go to `colab.research.google.com`
- 2 Create new notebook
- 3 Type code in cells
- 4 Run with Shift+Enter

Note

Works best on Chrome/Firefox

Printing Messages

```
1 print("Hello, World!")  
2 print("My name is Alice!")
```

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Activity:

- Print your name
- Print your favorite food

Variables

```
1 name = "Rahul"  
2 age = 12  
3 print(name, "is", age, "years old")
```

Variables

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2 age = 12  
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Try:

- Store your school name
- Store your class

Basic Math

```
1 a = 10
2 b = 5
3 print(a + b)    # Addition
4 print(a * b)    # Multiplication
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Activity: Calculate area of rectangle
(area = length \times width)

If-Else Statements

```
1 age = 12
2 if age >= 13:
3     print("Teen")
4 else:
5     print("Kid")
```

If-Else Statements

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Challenge: Check if number is even or odd

Hint: Use % operator

Loops

For Loop:

```
1 for i in range(5):  
2     print("Hello!")
```

While Loop:

```
1 count = 0  
2 while count < 3:  
3     print(count)  
4     count += 1
```

Story Generator

```
1 name = input("Enter name: ")
2 animal = input("Enter animal: ")
3 for i in range(3):
4     print(name, "met a", animal)
```

Story Generator

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2 animal = input("Enter animal: ")
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```

Enhance:

- Add more characters
- Use if-else for different endings

Recap

Today We Learned:

- Printing messages
- Variables
- Basic math
- If-else decisions
- Loops (for/while)

Questions?

Ask anything!

Next Steps

Before Next Session:

- Try making a simple calculator
- Experiment with more loops

Next: Fun with AI - Teachable Machine!