PYTHON FOUNDATIONS: FROM BASICS TO PRACTICE

SESSION 2: MAKING CHOICES WITH IF-ELSE

TABLE OF CONTENT

INTRODUCTION

Have you ever wanted your program to do different things depending on the situation? Like when you choose what to wear based on the weather, computers also make choices. In today's session, you'll learn how to teach your program to make decisions using if-else statements. It's like giving your program the ability to pick between options, which can make it really smart and useful!

LOGICAL OPERATORS

1."AND" OPERATOR: The "and" operator lets you check if multiple conditions are true at the same time. It's like saying, "Both things need to be true."

2."OR" OPERATOR: The "or" operator allows you to check if at least one of the conditions is true. It's like saying, "One of these things needs to be true."

3."NOT"OPERATOR: The "not" operator is used to flip the truth of a condition. It's like saying, "The opposite of what you think."

03 COMPARISON OPERATORS

EQUAL

NOT EQUAL

GREATER THAN

LESS THAN

GREATER THAN OR EQUAL TO

LESS THAN OR EQUAL TO

06 IF STATEMENT

```
is_raining = True

if is_raining:
    print("If it's raining”)
    print(”I'll take an umbrella.")
```

An "if statement" is like a question that your program asks itself. It helps your code decide what to do based on conditions.

Imagine you're trying to decide whether to bring an umbrella with you. If you look outside and see that it's raining, you might say, "If it's raining, I'll take an umbrella."

In programming, it's kind of the same. You give your program a condition to check, and if that condition is true, your program will do something. If it's not true, it can do something else, or nothing at all.

05 ELSE STATEMENT

```
budget = 1000
item_price = 1200
if item_price <= budget:
    print("I'll buy it!")
else:
    print("It's too expensive. I'll pass.")
```

Imagine you're going shopping and you have a budget. If the item you want to buy is within your budget, you might say, "If it's affordable, I'll buy it." But what if it's not within your budget? That's when the else statement comes into play.

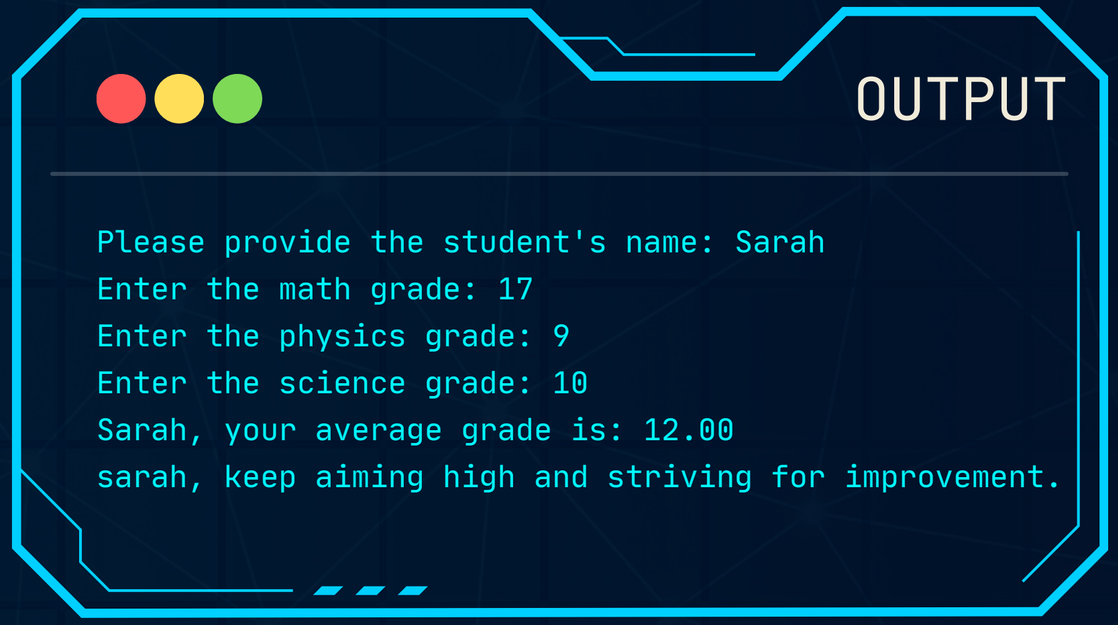
In Python, the else statement lets your program choose between two options.

HOMEWORK ASSIGNMENT: STUDENT PERFORMANCE EVALUATION

In our previous session, we set the foundation for calculating a student's average grades in math, physics, and science.

Today, we're delving deeper into coding as we explore the power of decision-making using if-else statements.

Your task is to complete the program, calculating the average grade based on subject inputs, and then implement an if-else statement to evaluate the student's performance. Celebrate their success if the average is 15 or higher, and offer encouragement for improvement if not. Happy coding!



HAPPY CODING AHEAD!

Every line of code you write is a step towards mastering Python. Keep practicing, keep exploring, and keep pushing your boundaries.

Thank you for joining us on this journey!

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