Making Decisions

Objectives

By the end of this lesson, you will be able to:

- Evaluate expressions using operators like ==, >, >=, <, <=.
- Use if statements to make decisions based on comparison results.
- Utilize if-else and nested if-else statements for complex decision-making.

Comparing Values Using Operators

Python provides several operators for comparing values.

Operators include ==, >, >=, <, <=.

Each operator serves a different purpose for comparison.

Using the Comparison Operator (==)

```
x = 5

y = 7

result = x == y

print(result) # Output: False
```

Using the Greater Than Operator (>)

```
score = 90

passing_score = 70

is_passing = score > passing_score

print(is_passing)

# Output: True
```

Making Decisions with Conditional Statements

```
number = 10

if number > 0:
```

print("The number is positive.")

- Conditional statements allow programs to react differently based on conditions.
- The if statement is the most basic form of control flow.

The ‘if-else’ statement

number = 7

if number % 2 == 0:

print("The number is even.")

else:

print("The number is odd.")

Nested ‘if-else’

number = -5

if number > 0:

print("The number is positive.")

elif number < 0:

print("The number is negative.")

else:

print("The number is zero.")