5.1.2 Branching

There are two main ways of controlling the sequence of actions in a prog is called **branching**, or **selection**. Branching allows you to get the com number of paths based on the value of a condition.

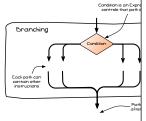


Figure 5.4: Branching commands the computer to take one of a number

- Branching is a kind of action. You can command the computer of paths.
- A branch has a condition that is evaluated, and based on the con takes one path.
- The branch is the act of choosing the path, when its comman computer evaluates the condition and then moves to the instructionath.
- · Languages usually offer two kinds of branching statements:
- If Statement to select between two paths based on a Boolea
 Case Statement to select a path based on an ordinal value.
- The Branch will have one entry point, and one exit point. This fe combine statements together like building blocks. This idea con ples of Structured Programming, where each component in th a single entry and exit point.

⁰Integers and Characters are ordinal values. Ordinal values have a defined sequence which value comes next in the sequence. Integers are Ordinal as you can say that the I numbers are not ordinal as you cannot say which value comes next in the sequence.

CHAPTER 5. CONTROL FLOW

If Statement

The if statement is the most frequently used branching statement. It all run code based on the value of a Boolean expression (the condition). To optional else branch that is executed when the condition is false.

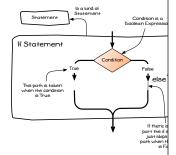


Figure 5.5: If statement lets you selectively run a branch of

- An if statement is an action. It allows you to command the contract based on a Boolean expression.
- The if statement has two branches, one that is taken when the coother when it is False.
- The False branch may optionally have instructions that are car condition is False.
- If there are no instructions you want performed when the condo not need to include an else branch, and the if statement will branch when the condition is False.
- . The if statement has one entry point, two paths, and then one e

CHAPTER 5. CONTROL FLOW

5.1.7 Summary

This section has introduced a number of new actions that you can use in your code to create more dynamic programs.

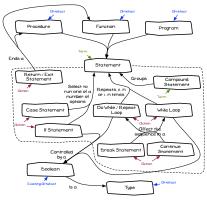


Figure 5.17: Key Concepts introduced in this Chapter

- Artefacts are things you can create and use.
- . Terms are things you need to understand.
- Actions are things you can command the computer to perform.

28€