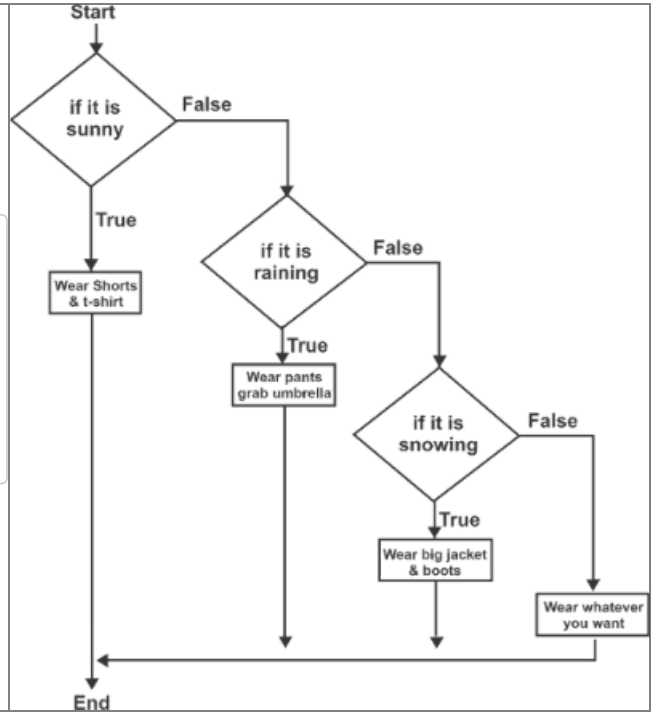
Listen

TidBIT

There is a light that goes on in a person's mind when they start thinking like a programmer, even when not programming. When you get up in the morning and are trying to decide what to wear, think about making that decision in a program:

```
if it is sunny:
    wear shorts and a t-shirt
elif it is raining:
    wear pants and grab an umbrella
elif it is snowing:
    wear a big jacket and boots
else
    wear whatever you want
```



Programs often represent real-world contexts, so if you start thinking like that in your own life, you will become a better programmer without even sitting in front of a computer!

Required Resources

Textbook: *Introduction to Scripting*, Chapter 3
This zyBooks reading will provide you with information on the following topics:

- Decision branching: if-else branches, if-else statement, more if-else, equality and relational operators, Boolean operators, membership and identity operators, order of evaluation, code blocks and indentation, conditional expressions, and additional practice

Reading: Guide to Pseudocode PDF (course_documents/IT%20140%20Guide%20to%20Pseudocode.pdf?ou=1922834)
This resource provides instructions on how to create pseudocode. Pseudocode can help you design your program in a logical way, which will make writing the actual code much easier. As a note, some of the examples in this reading cover loops and functions, which you will learn more about in future modules. Continue to refer to this reading throughout the course. As you read through the guide, consider these questions:

- What are characteristics of "good" pseudocode?
- How might pseudocode help you plan out a larger program?

Reading: What Is a Flowchart? (https://www.lucidchart.com/pages/what-is-a-flowchart-tutorial)
This guide provides an overview of flowcharts, including how to create basic flowcharts and their applicability to software development. This site also provides free access to a flowcharting tool, Lucidchart, that you can use to complete the activities in this module, or you can use Microsoft Word or PowerPoint. As you read through the guide, consider the following questions:

- What planning should you do before creating the actual flowchart?
- How can creating a flowchart help you organize your thoughts?

Note: A text version of the diagrams in this reading is also available: What is a Flowchart? Text Version (course_documents/IT%20140%20What%20Is%20a%20Flowchart%20Text%20Version.pdf?isCourseFile=true&ou=1922834)

Additional Support (Optional)

Video: Writing Good Beginner Pseudocode (https://www.youtube.com/watch?v=D0qfR606tVo) (9:28)
This optional video gives an additional example of pseudocode for a simple programming problem. In the video, you will hear about the basics of pseudocode, as well as why it is important for different programs. You will then see an example of pseudocode for a simple problem, and how that pseudocode can be easily turned into actual code.

Note: The sample pseudocode in this video did not use capitalization for keywords, as you read about in the “Guide to Pseudocode” reading. However, using capitalization and indentation is important. It helps make your pseudocode easier to read.

A video transcript is available: Transcript for Writing Good Beginner Pseudocode (course_documents/IT%20140%20Writing%20Good%20Beginner%20Pseudocode%20Transcript.pdf?isCourseFile=true&ou=1922834)

Video: Python Tutorial for Beginners 6: Conditionals and Booleans - If, Else, and Elif Statements (https://www.youtube.com/watch?v=DZwmZ8Usvnk) (16:27)
This optional resource demonstrates how conditionals (if, elif, and else) function in Python to determine what is executed. Boolean examples are also examined in order to show why a statement would be evaluated as true or false.

A video transcript is available: Transcript for Python Tutorial for Beginners 6: Conditionals and Booleans - If, Else, and Elif Statements (course_documents/IT%20140%20Python%20Tutorial%20for%20Beginners%206%20Conditionals%20and%20Booleans%20Transcript.pdf?isCourseFile=true&ou=1922834)