

GSET - Intro to Programming with Python

Tristan Hill

Tennessee Technological University

Summer 2021

Module 7 - Repetition

Module 7 - Repetition

- Repetition and Programming
- Types of Loops
- Repetition and Program Flow
- Nested Structures
- An example in Python

Repetition and Programming

Have you noticed that you have repeated code in your programs? Is this OK?

- 1
- 2
- 3
- 4

What can you do to reduce the length and increase the readability of your programs?

Types of Loops

There are different types of loops used for different situations.

- while loop (entry controlled)
- for loop (entry controlled)
- do while loop (exit controlled)

Repetition and Program Flow

Previously the programs we have written look like a single line. Now, our programs began to flow in a much more complex way...

Nested Structures

Nested Structures

Commonly Used Flowchart Symbols

- Flowline
- Terminal
- Process
- Decision
- Input/Output
- and many more ...

Flowcharting is a tool for brainstorming and it can be used for communication and education. A flowchart is not a program.

An example in Python

An example in Python

A simple **for** loop

...

...

An example in Python

A simple **while** loop

...

...