

# GSET - Intro to Programming with Python

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## Module 7 - Repetition

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- 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

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...

...

# An example in Python

A simple **while** loop

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...

...