

Introduction to Programming

Overview

This training is to introduce you to the fundamentals of programming and gain insights into how to solve problems computationally – thus, improving your problem-solving skills. The training is divided into two parts. The first part discuss computers and programming. The second part is a bit language-agnostic at the beginning, but lean toward JavaScript (often abbreviated JS) to demonstrate programmatically the general programming basics such as variables, decision, repetition, functions and data structures.

Once you feel comfortable with the two parts, you will be able to write basic programs. Overall, the primary focus of this training is logic building and hands-on experience in programming basics within the context of computer science and programming.

Contents

Part 1

1. Computers
2. Program
3. Programming language
4. Code
5. Exercise 1.0 – 1.5
6. Take home Quiz 1.0

Part 2

1. Variables
2. Decision
 1. Exercise 2.0 – 2.5
 2. Take home Quiz 2.0
3. Repetition
4. Functions
 1. Exercise 2.6 – 2.10
 2. Take home Quiz 2.1
 3. Problem: Write a program (not yet decided)
5. Data structures

1. Exercise 2.11 - 2.15
2. Take home Quiz 2.3
3. Project: Write a program (not yet decided)