

# CSCI 1301 Book

## Contents

|  |          |
|--|----------|
| <b>General Concepts</b>                  | <b>1</b> |
| Writing and Compiling Programs . . . . . | 1        |
| Computer Usage . . . . .                 | 2        |
| <b>Hello World</b>                       | <b>2</b> |
| My First Subtitle! . . . . .             | 2        |
| My Second Subtitle . . . . .             | 2        |
| Block quote examples . . . . .           | 3        |
| Inline Code block . . . . .              | 3        |
| Image . . . . .                          | 3        |
| Label test . . . . .                     | 3        |
| Link test . . . . .                      | 3        |

## General Concepts

- Programming languages types and paradigms
  - Machine language instructions
  - Assembly instructions
  - High-Level Programming Languages
  - Object-oriented paradigm and data hiding
- The difference between roles (user, tester, programmer)
- How complex piece of software *reuse* previous pieces.
- The importance of security
  - Types of attack (malware, phishing, social engineering, zero-day)
  - Types of loss (loss of integrity / availability / confidentiality)

## Writing and Compiling Programs

- Understand what the “flow of development” is:
  - Having a goal
  - Writing down specifications
  - Creating the source code
  - Running the compiler

- Reading the compiler’s output, warning and error messages
- Looking for documentation and help on-line and off-line
- Testing
- Making sure the program is secure
- Editing
- Reusing
- Using an IDE to
  - Create a project,
  - Perform some of the steps of the “flow of development”,
  - Correctly save and re-open projects,
  - Understand basic features of break points and debugging.

## Computer Usage

- How to download and install an IDE in a secure way
- How to share and zip a project
- How to use shortcuts
- How to look for on-line documentation

## Hello World

Setting up things. This is a sample document.

### My First Subtitle!

Included code block

```
using System;

class Program {
    static void Main() {
        Console.WriteLine("Hello, world!");
    }
}
```

### My Second Subtitle

| # | Header      |
|---|-------------|
| 1 | Table row 1 |
| 2 | Table row 2 |
| 3 | Table row 3 |

## Block quote examples

Short

If you automate a mess, you get an automated mess.

Longer

Programming without an overall architecture or design in mind is like exploring a cave with only a flashlight: You don't know where you've been, you don't know where you're going, and you don't know quite where you are.

## Inline Code block

Some inline `int` x expressions `x = 0;`.

```
using System;

class Program {
    static void Main() {
        Console.WriteLine("Hello, world!");
    }
}
```

## Image

### Label test

always use strong passwords and enable 2FA

### Link test

Relative Link within same document

Absolute Link<sup>1</sup>

Cross lecture link

---

<sup>1</sup><https://augusta.edu>



Figure 1: “my first image”