Useful Formulas, Constants, Units and Definitions
Volume II - Programmers Paradise
Version 0.000

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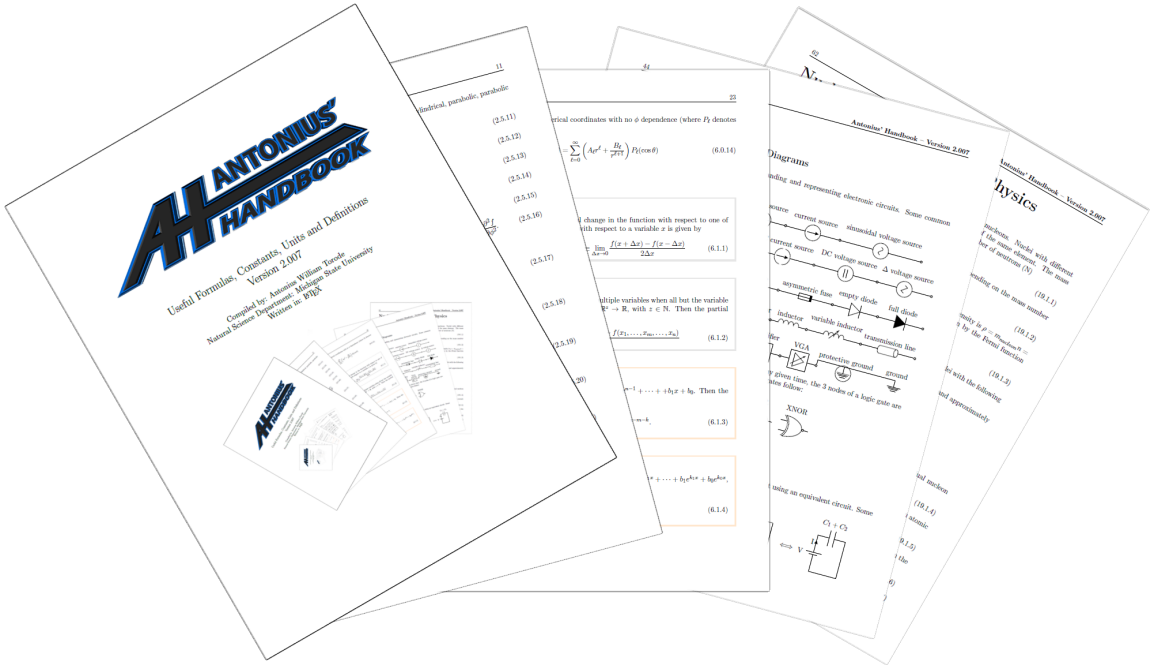

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Preface

This document is a compilation of useful programming formulations, definitions, constants, and general information used throughout my own schooling and research as a reference while furthering education. It's purpose is to provide a complete 'encyclopedia' per say of various codes, syntax and significant ideas used often. The idea and motivation behind it is to be a quick reference providing easily accessible access to necessary information for either double checking or recalling proper formulations or algorithms for use in various situations due to my own shortcomings in matters of memorization. All the material in this document was either directly copied from one of the references listed at the end or derived from scratch. On occasion typos may exist due to human error but will be corrected when discovered.

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For more information about this book or details about how to obtain your own copy please visit:

https://msu.edu/~torodean/AHandbook.html

Disclaimer

This book contains codes, formulas, definitions, and theorems that by nature are very precise. Due to this, some of the material in this book was taken directly from other sources. This is only such in cases where a change in wording or codes could cause ambiguities or loss of information quality. Following this, all sources used are listed in the references section.

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(Yes, this is a contradiction.)

Contents

Introduction

This document is still under the initial formatting stages and useful information will be added soon.

C

C++

3.1 Basic Input and Output

To output text via a terminal you can use:

```
std::string text = "Hello World!";
std::cout << text << std::endl; //std::endl is equivalent to the new-line character.
```

To get input as a user in the type of a std::string, you can use:

```
std::string input = "";
std::cout << "Enter some text: ";
std::getline(std::cin, input);
```

3.2 Converting Between Types

std::string to int

To convert a string to an integer you can use:

```
std::string text = "31415";
int number = std::stoi(text);
```

3.3 Mathematical Commands

Prime Number

A simple brute for method to determines if a number of type long is prime or not.

```
bool isPrime(long number) {
   int Counter = 0;   //P is a counter for how many numbers can divide evenly into x
   if (number == 0 || number == 1 || number == 4) {
      return false;
   }
   for (long i = 1; i <= ((number + 1) / 2); i++) {
      if (Counter < 2) {
         if (number % i == 0) {
            Counter++;
         }
      } else {
         return false;
      }
   }
   return true;
}
```

CSS

HTML

Linux

PHP

Python

ROOT

References