C Programming Notes

Tyler Maxwell

February 2023

1 Introducing C

1.1 History of C

Origins

C is a by-product of the UNIX operating system, which was developed at Bell Labs by Dennis Ritchie

Standardization

C-Based Languages

1.2 Strengths and Weaknesses of C

Strengths

- Efficiency
- Portability
- Power
- Flexibility
- Standard Library
- Integration with UNIX
- C is particularly powerful in combination with UNIX(including the popular variant known as Linux). In fact, some UNIX tools assume that the user knows C.

Weaknesses

Effective Use of C

this is the content

```c
// Hello.c
#include <stdio.h>

int main(void){
    printf("Hello, World");
    return 0;
}
```

2 C Fundamentals

2.1 Writing a Simple Program

Program: Printing a Pun

pun.txt

2.2 The General Form of a Simple Program
2.3 Comments
2.4 Variables and Assignment
2.5 Reading Input
2.6 Defining Names for Constants
2.7 Identifiers
2.8 Layout of a C Program
3 Formatted Input/Output
3.1 The printf Function
Conversion Specifications
Program: Using printf to Format Numbers
Escape Sequences
3.2 The scanf Function
4 Expressions
4.1 Arithmetic Operators
4.2 Assignment Operators