**GROUP 5**

**C PROGRAMMING**

**History:**

It was developed at Bell Laboratories by Dennis Ritchie in 1972. Dennis based C off of an older programming language called BCPL and the programming language called B, Originally C was developed for use in UNIX, but now C is used for many more things such as: operating systems, language compilers, assemblers, text editors, print spoolers, network drivers, modern programs, databases, language interpreters, and utilities.

**IDE:**

1. CLion -- linux, Mac, Windows - free
2. Visual Studio -- Windows - free for one person, subscription for group
3. Xcode -- Mac - free

**Language Syntax**:

1. Type Casting
   * 1. Casts variable as an integer
        1. int variable
     2. Casts variable as a decimal
        1. float variable
        2. double variable
     3. Casts variable as a “string”
        1. char variable
2. Declaring a variable

cast\_type variable\_name = value

1. Decision Statements

if (condition) {

statement(s);

}

else {

statement(s);

}

1. While loop

while( condition ) {  
 statement(s);  
 }

1. For loop

for ( init; condition; increment ) {  
 statement(s);  
 }

1. Print

printf(“words or letters”, variable)

8. Boolean

C: doesn’t actually have a built in boolean structure, uses numbers as true/false(1 is True, 0 is False)

* + 1. bool variable;

if (condition) {

variable = 1;

}

else {

variable = 0;

}

Helpful Websites:

1. learn-c.org
   1. Free, interactive C tutorial intended for all skills levels to learn C
2. tutorialspoint.com/cprogramming
   1. Tutorial designed for programming designers needing to learn the C language from scratch
3. programiz.com/c-programming#learn-c-tutorial
   1. “The Definitive Guide” to the why’s and how’s of learning C programming language
4. youtube.com/playlist?list=PLS1QulWo1RIZlA5oGczk8kY7Eenytc33s
   1. 30 videos ranging from tutorials on basic and advanced concepts of programming in the C language.
5. youtube.com/playlist?list=PLfVsf4Bjg79CZ5kHTiQHcm-l2q8j06ofd
   1. 162 videos ranging covering more concepts about learning C language

**Helpful Books:**

1. The C Programming Language (All Levels)
2. Programming in C (Beginner)
3. 21st Century C: C Tips from the New School (Intermediate)
4. Expert C Programming: Deep Secrets (Above Intermediate)

**Sources:**<https://www.le.ac.uk/users/rjm1/cotter/page_80.htm> <http://groups.engin.umd.umich.edu/CIS/course.des/cis400/c/c.html>

http://www.cyberprogrammers.net/2015/11/top-9-best-cc-ides-for-windowsmac-os.html