**Data Structures using C**

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* #include: preprocessed libraries to be included in the program
* .c extension for main program
* .h for header file
* .txt for text file
* Main
  + int main() {

printf(“Hello World”);

return 0;

}

* <stdio.h> In/out = for printf, scanf, etc
* <string.h> String
* <math.h> Math
* i++ = value of I is used first, then incremented after
* ++I = incremented first, then value is used
* Parts of a C Program
  + Header files
    - At the beginning of the other source file
    - Implementations of common operations. Like importing libraries
  + Command Line Arguments
    - int main (int argc, char \* argv[])
    - Argc = number of arguments (including program name)
    - Argv = array of char\*s (an array of C strings) (values of arguments)
    - Argv[0] = program name
    - Argv[1] = first argument
  + Primitive Types
    - Char
    - Short
    - Long
    - Double
    - Float
  + Variable
  + Storage space for a specific type of data. The data in this space are referenced by the name of this variable
  + Scope – how a variable can be referenced
    - If a variable is declared inside a method, it is only accessible inside that method. If a variable is created inside a loop or if statement, it can only be accessed inside where it was declared
  + Compound Data Types
    - Array: A container for a set of data items belonging to the same data type
  + Memory Type
    - Static/Stack memory
    - Dynamic/Heap memory – used with pointers
  + Relational Expression
    - True is any non-zero value, Falese is a zero value