* C is a general purpose, imperative computer programming language that supports structured programming
* Uses statements that change a program’s state, focuses on how
* Currently, it is one of the most widely used programming languages of all time
* C is a modern language
* has most basic control structures and features of modern languages
* deigned for top-down planning
* organized around the use of functions (modular design) structured programming
* a very reliable and readable program
* C is used for everything from microcomputers, Unix/Linux systems to pc’s and mainframes
* C is the preferred language for producing word processing programs, spreadsheets and compilers
* C has and continues to play a strong role in the development of Linux
* C programs are easy to modify and easy to adapt to new models or languages
* In the 1990s, many software houses began turning to the C++ language for large programming projects
* C++ is a subset of C++ with object-oriented programming tools added
* any C program is a valid C++ program
* BY learning C, you also learn much of C++
* C remains a core skill needed by corporations and ranks in the top 10 of desired skills
* C provides constructs that map efficiently to typical machine instructions and thus is used by programs that were previously implement in assembly language
* provides low-level access to memory (has many low-level capabilities)
* requires minimal run-time support
* was invented in 1972 by Dennis Ritchie of Bell Laboratories
* Ritchie was working on the design of the Unix Operating System
* C initially became known as the development language of the UNIX operating system
* virtually all new major operating systems are written in C and/or C++
* C evolved from a previous programming language named B
* uses many of the important concepts of B while adding data typing and other powerful features
* By the late 1970s, C had evolved into what is now referred to as “traditional C”
* The rapid expansion of C working on many different hardware platforms led to many variations that were similar but often incompatible
* a standard version of C was created (C89/C90, C99, C11)
* A program written only in Standard C and without any hardware-dependent assumptions will run correctly on any platform with a standard C compiler
* Non-standard C programs may run only on a certain platform or with a particular compiler
* C89 is supported by current C compilers
* most C code being written today is based on it
* C99 is a revised standard for the C programming language that refines and expands the capabilities of C
* has not been widely adopted and not all popular C compilers support it
* the current standard is commonly referred to as C11
* some elements of the language as defined by C11 are optional
* also possible that a C11 compiler may not implement all of the language features mandated by the C11 standard
* this class will base its examples and concepts off C11
* C is one of the most important and popular programming languages
* it has grown because people try it and like it