Reading Notes

1:

* Each byte represents some text character in the program
* Most modern systems represent text characters using the ascii standard that represents each character with a unique byte-sized integer value
* Files that only contain ASCII characters are known as text files, all other files are known as binary files
* When the computers turns the source code into packaged code called an executable object program and stored as a binary disk file
* On a unix system the translation from source file to object file is performed by a compiler driver
* Phases of compilation:
* Preprocessing, The preprocessing phase goes through the source code and finds all occurrences of # and for instance when it sees #include <stdio.h> it then reads the contents of the system header file stdio.h and inserts it directly into the program text.
* Compilation Phase, The compiler (cc1) translates the program hello.i into hello.s which contains an assembly language program
* Assembly phase, The assembler translates hello.s into machine language instructions and packages them in a form known as a relocatable object program and stores the results in hello.o. The hello.o file is a binary file whose bytes encode machine language instructions rather than characters.
* Linking phase, The linking phase is where the all the functions such as printf are linked to from the libraries that were found in the preprocessing phase.