ELF stands for executable and linking format. ELF was developed to be compatible with multiple operating environments or different kinds of computers. It is used for the three main types of object files: relocatable, executable, and shared. The focus will be the executable files.

To simplify things, ELF is a template or guide to organizing a file that can be run on a computer, which is called an executable file. ELF can be broken up into five segments, which are the header, program header table, code, data, and extra information. Segments can be compared to chapters in a book. The header (first box in figure) acts like a table of contents for a file. It has general information about the file and has pointers to the start of the different sections in the file like how a table of contents has the name and the starting page of each segment/chapter. The program header table (second box) prepares the program to be run by giving a description of the segment. It is comparable to brief summaries of each chapter in a book. The code segment (4 – 6 boxes) is made up of sections, such as .interp, .plt, and .text. Sections are like sub-categories to segments. The main section of this segment is .text. It contains all of the instructions the computer needs to do. The data segment (6 – 10 boxes) is also made up of smaller sections, such as .got, .bss, and .data. The main section is .data. It contains all of the global variables in the program. This acts like a glossary of definitions in a textbook, which lists all the main words. The extra information is the section header table. This part is optional. This table contains many entries, one for each segment. Each entry has information, such as the segment name and size.

