Parsing in C

<HOW YOUR COMPUTER READS YOUR CODE>

```
source code
    |
    v
 compiler
    |
    v
binary code
```
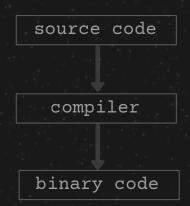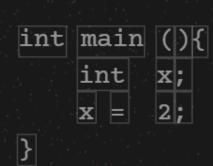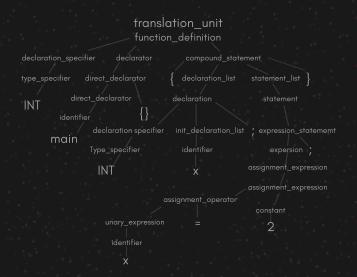
1.) SENT THROUGHT THE COMPILER

The first stage of your source code being read by the computer is for it to be sent through the compiler. The compiler will divide and analysis your text into machine code.

2.) LEXICAL ANALYSIS

First the compiler divides your text up into individual tokens, through a process called tokenization. These tokens are comprised of key words and numbers in your source code.

```
int main (){
    int  x;
    x =  2;
}
```


3.) SYNTACTICAL ANALYSIS

Then these tokens are formed into a hierarchical structure known as a parse tree. This is how the computer identifies the structure of your source code.

4.) SEMANTIC ANALYSIS

The compiler then records context about the program, including variable and fuction names.

Name	type	Scope
main	func int	global
x	int	local main

5.) GENERATES

```
01010101000101
00101010110101
01011101000000
```

Contextualizes your code - converts to assembly and is read in binary.