

Compiler

Assembler

High-Level Language

Assembly Language

Machine Language

```
int age = 10;  
char initial = 'C';
```

```
movq    %rsp, %rbp  
.cfi_def_cfa_register 6  
movl    $10, -4(%rbp)  
movb    $67, -5(%rbp)  
movl    $0, %eax  
popq    %rbp
```

```
01000010 01001001  
00000000 00101110  
00101110 01100111  
01110101 01101001  
01100100 00000000
```