From Machine Code to Present Day

1st Generation

1945: ENIAC Machine Code

2nd Generation

1952: IBM 701 Assembler

3rd Generation (High Level)

1957: FORTRAN

1958: LISP

■ 1959: COBOL

Procedural Programming

- 1958: FORTRAN
- 1959: COBOL
- 1964: BASIC
- 1970: Pascal
- **1972:** C
- 1983: C++
- <u>1987: Perl</u>
- **1991: Python**

Structured Programming

- No Jumps
- Blocks
- Control Structures
- Structured Data
- 1960: ALGOL

Modular Programming

- Independent
- Interchangeable
- Single Aspect of Functionality
- 1960: ALGOL

Object-Oriented Programming

- Encapsulation
- Inheritance
- Polymorphism
- 1967: Simula
- 1972: Smalltalk
- 1983: C++
- 1995: Java
- **2000: C#**

Functional Programming

- 1958: LISP
- 1975: Scheme
- 1986: Erlang
- 1990: Haskell
- 1995: JavaScript & Ruby
- **2**000: C#
- 2003: Groovy & Scala
- **2007: Clojure**