Programming Platforms and Paradigms

code
academy

What is Software?

Wikipedia - "Computer software, or simply software, is a collection of data or computer instructions that tell the computer how to work"

Who is the developer?

Technopedia - "A developer is an individual that builds and create software and applications. He or she writes, debugs and executes the source code of a software application."
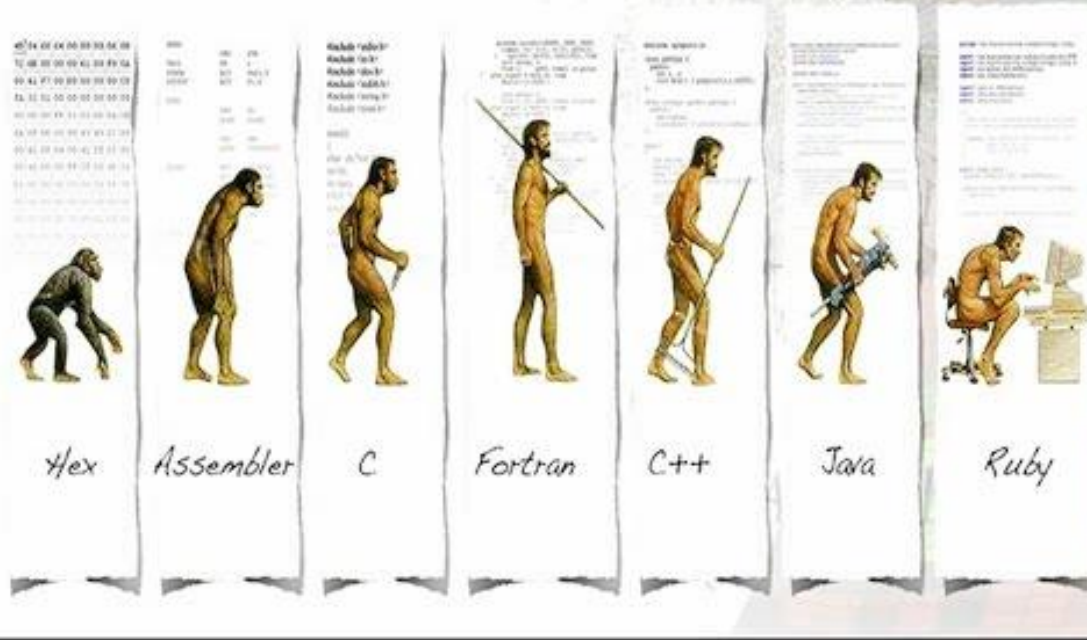
Software Platforms

Desktop - Windows, Linux, IBM, macOS, Solaris, ...
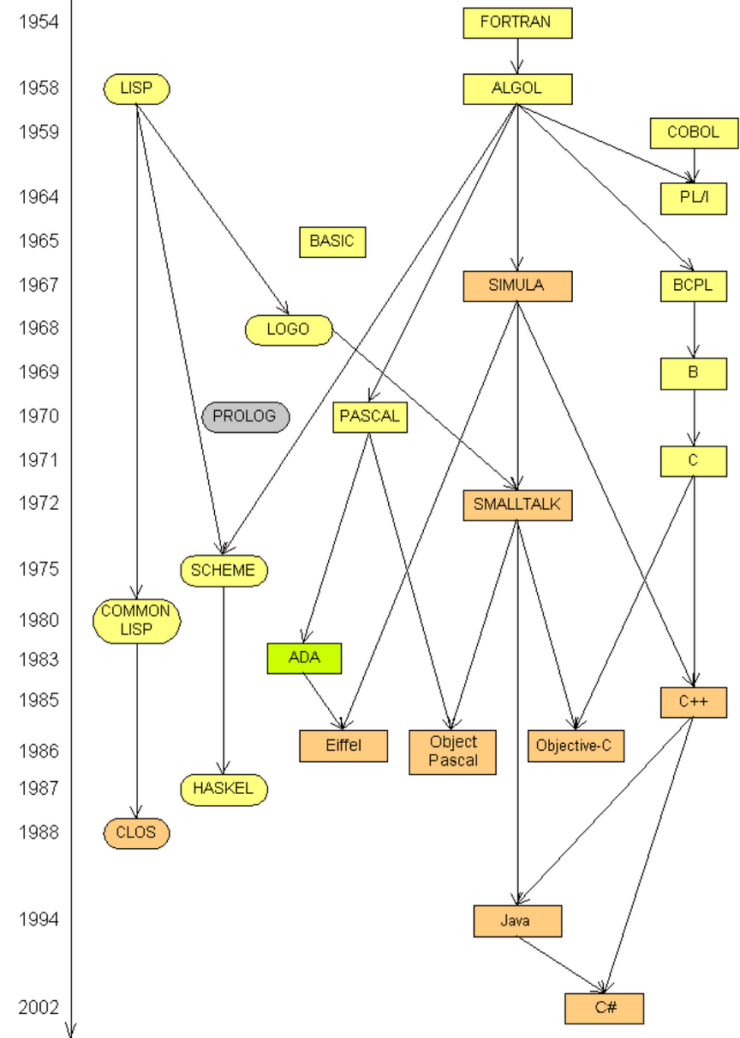
Mobile - Android, iOS, BlackBerry, Symbian, Windows Phone, ...

Evolution of Languages

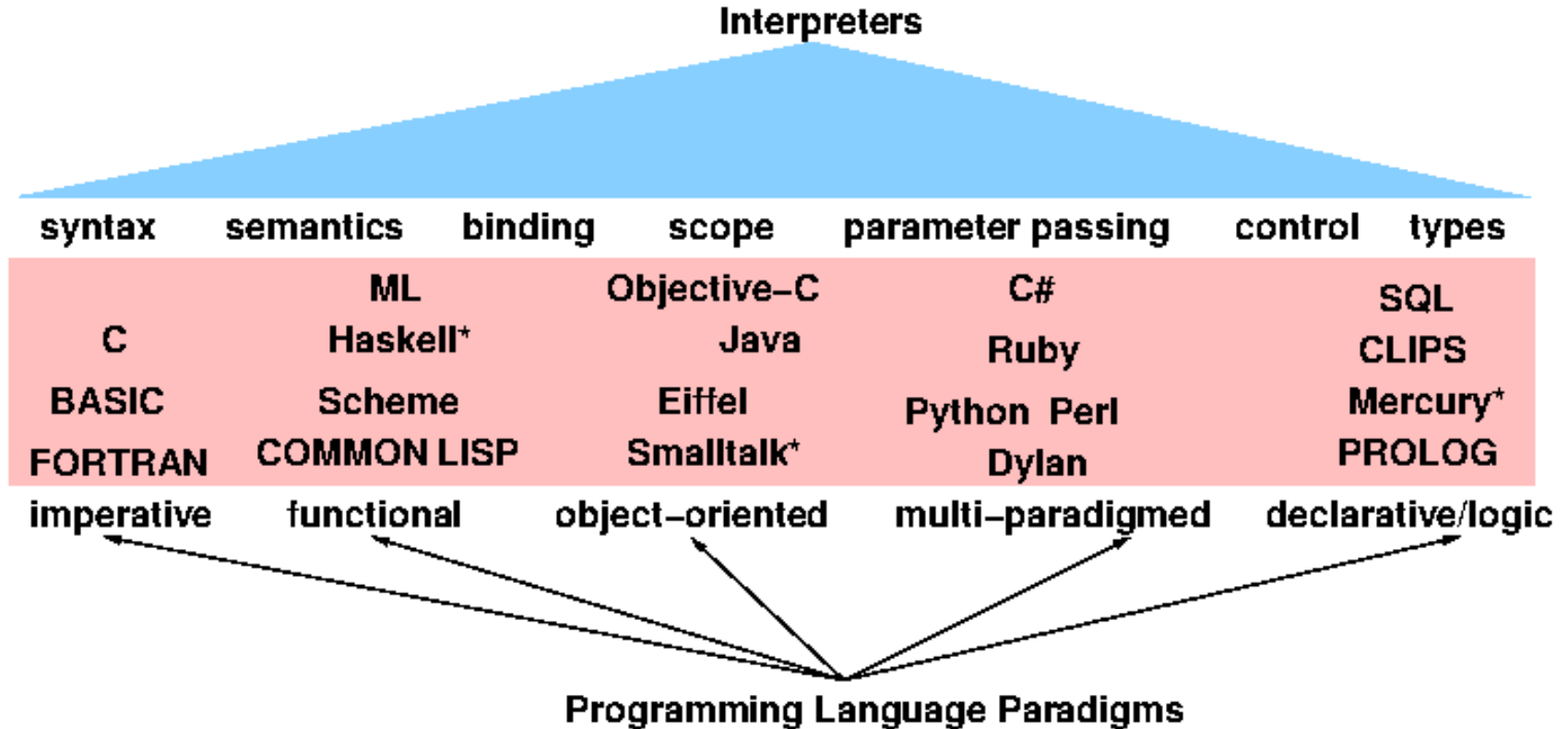The Evolution Of Computer Programming Languages

Hex   Assembler   C   Fortran   C++   Java   Ruby

Evolution of Languages

Programming Language Paradigm

- **Imperative** in which the programmer instructs the machine how to change its state,
    - **Procedural** which groups instructions into procedures,
    - **Object-oriented** which groups instructions together with the part of the state they operate on,
- **Declarative** in which the programmer merely declares properties of the desired result, but not how to compute it
    - **Functional** in which the desired result is declared as the value of a series of function applications,
    - **Logic** in which the desired result is declared as the answer to a question about a system of facts and rules,
    - **Mathematical** in which the desired result is declared as the solution of an optimization problem

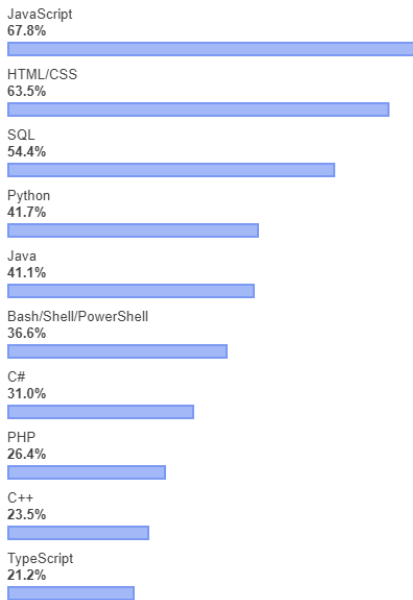# Programming Language Paradigm

Most Populars - Stackoverflow
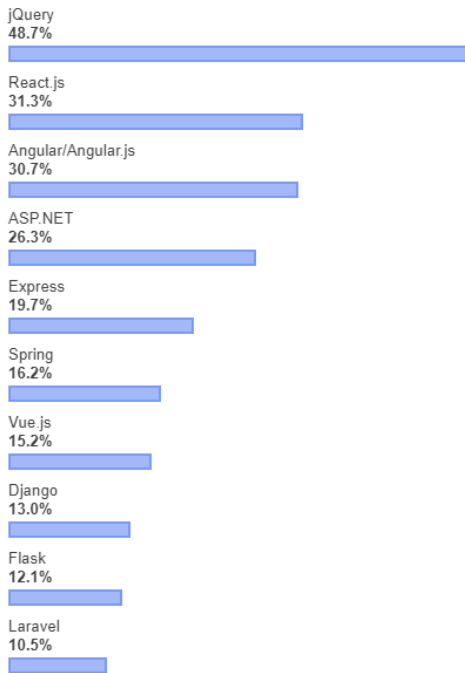
Most Popular Technologies

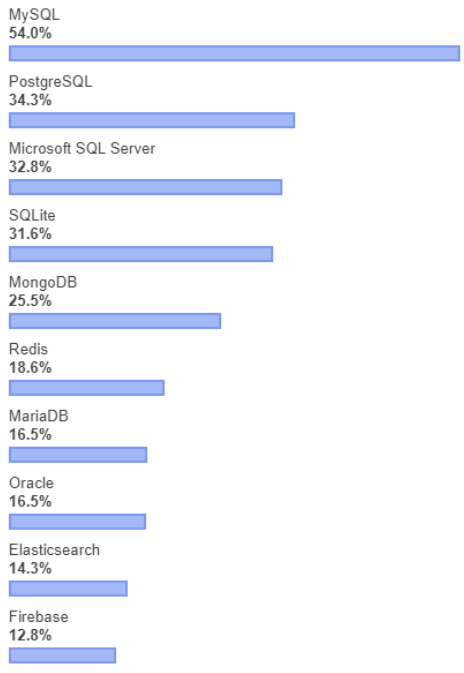### Programming, Scripting, and Markup Languages

All Respondents

JavaScript 67.8%	
HTML/CSS 63.5%	
SQL 54.4%	
Python 41.7%	
Java 41.1%	
Bash/Shell/PowerShell 36.6%	
C# 31.0%	
PHP 26.4%	
C++ 23.5%	
TypeScript 21.2%	

Web Frameworks

All Respondents

jQuery 48.7%	
React.js 31.3%	
Angular/Angular.js 30.7%	
ASP.NET 26.3%	
Express 19.7%	
Spring 16.2%	
Vue.js 15.2%	
Django 13.0%	
Flask 12.1%	
Laravel 10.5%	

Databases

All Respondents

MySQL 54.0%	
PostgreSQL 34.3%	
Microsoft SQL Server 32.8%	
SQLite 31.6%	
MongoDB 25.5%	
Redis 18.6%	
MariaDB 16.5%	
Oracle 16.5%	
Elasticsearch 14.3%	
Firebase 12.8%	

How Technologies Are Connected