Programming Platforms and Paradigms

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."
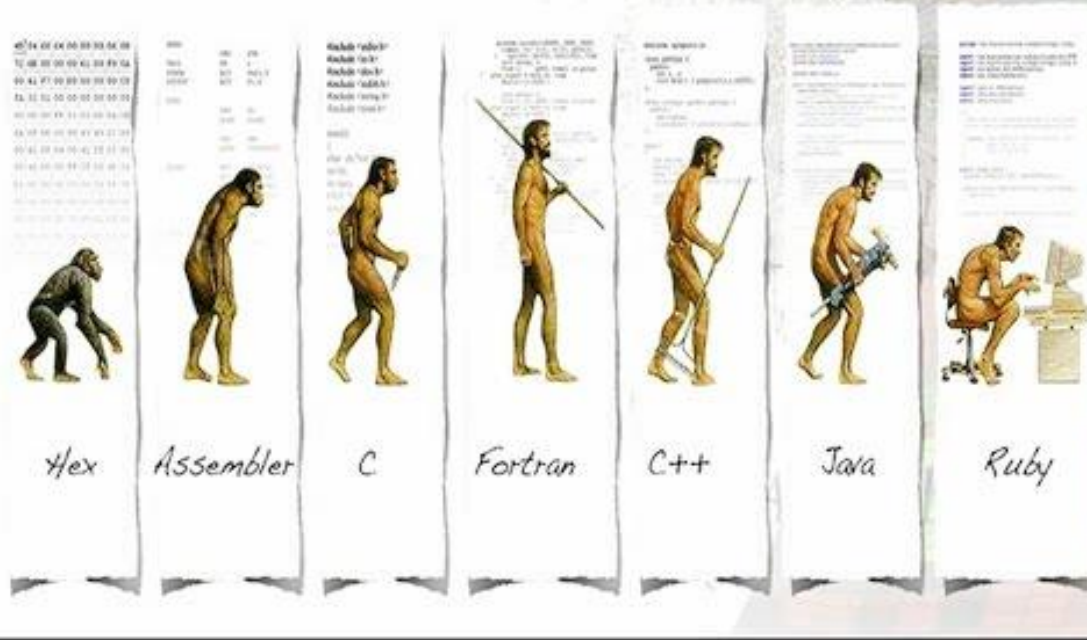
Software Platforms

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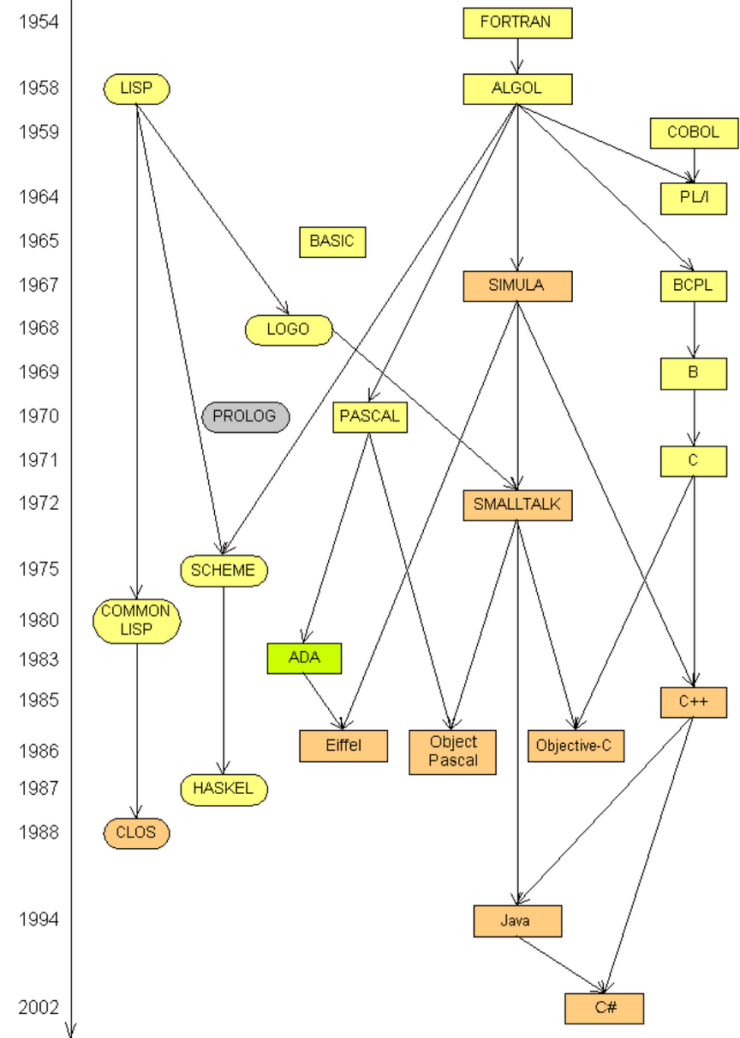
Mobile - Android, iOS, BlackBerry, Symbian, Windows Phone, ...

Evolution of Languages

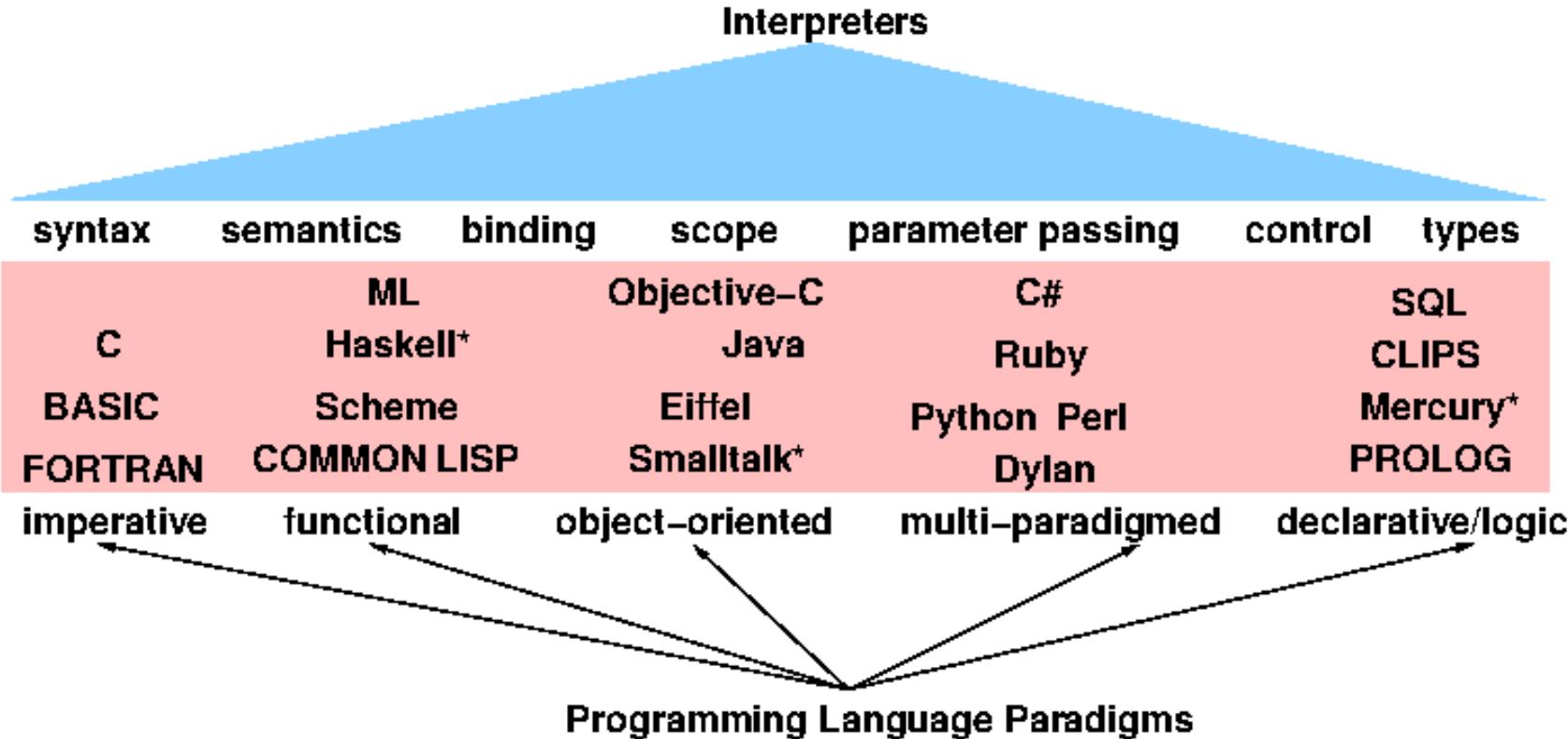The Evolution Of Computer Programming Languages

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

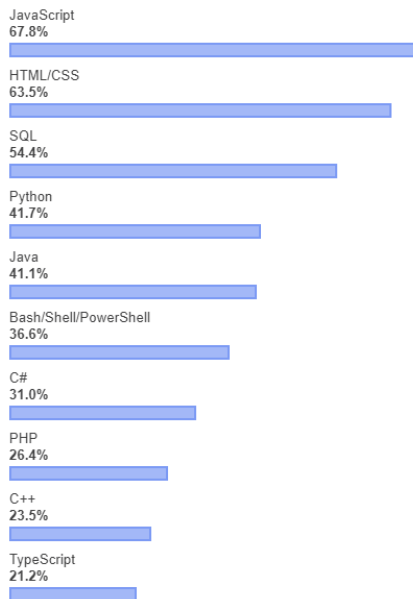# Programming Language Paradigm

Most Populars - Stackoverflow
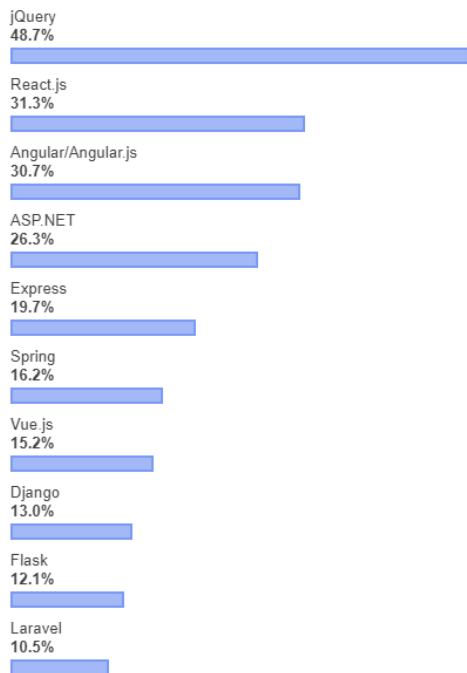
Most Popular Technologies

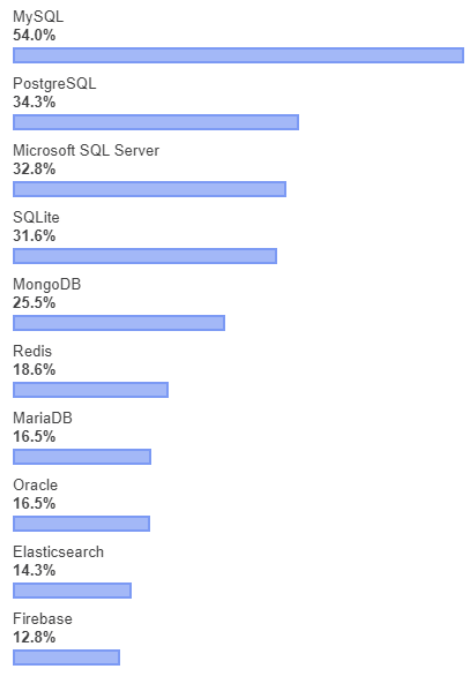### Programming, Scripting, and Markup Languages

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
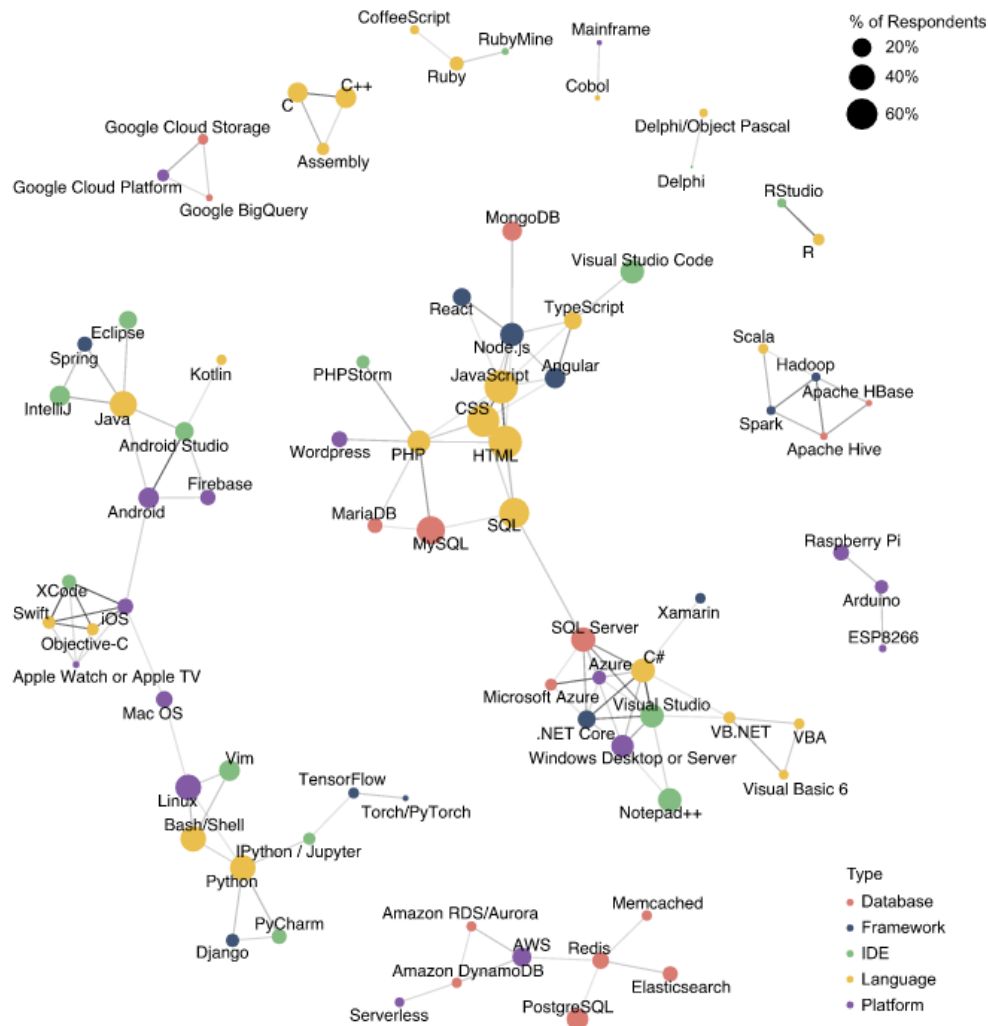12.8%

How Technologies Are Connected

Homework

1. Research about Programming Languages (Assembly, C, JavaScript, C#)
   a. Hansi Paradigmalara uygundur
   b. Hansi Sahelerde isitifade olunur
   c. Ustunlukleri
   d. Zeiflikleri

1. Check out https://insights.stackoverflow.com/survey/2019#technology