

Java uma linguagem que morre há 20 anos

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Academik



Oracle
Groundbreakers



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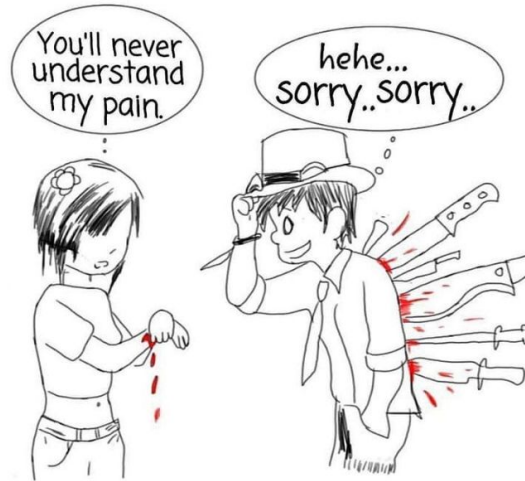
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¿Preciso aprender outras linguagens se ja
tem JavaScript?

¿Como sobrevivir num mundo poliglota?



debugging Java

**debugging
JavaScript**



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Evolução das linguagens de desenvolvimento



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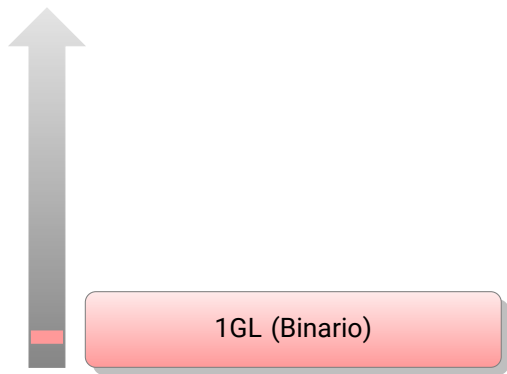
Gerações



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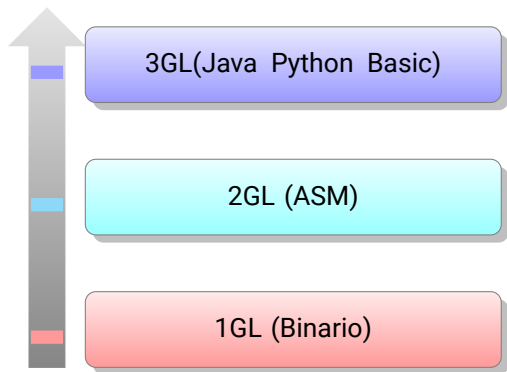
Gerações



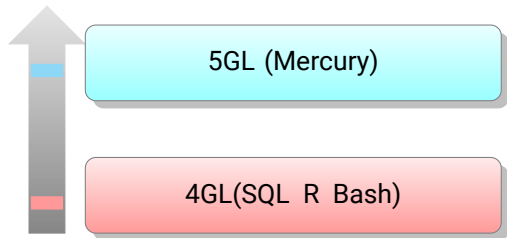
Gerações



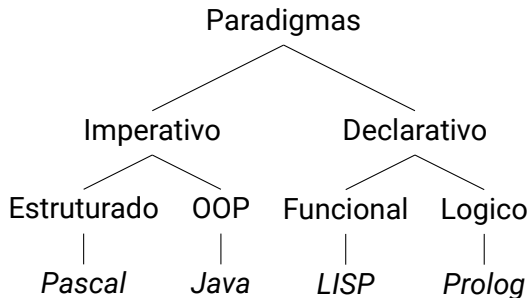
Gerações



Gerações



Paradigmas (Simplificação)





- 60s-80s Mainframes - RPG (AS/400), COBOL (z/OS, VME)
- 80s-2000s Uma linguagem para dominar o mundo - Java, Basic, C#, Pascal
- 2010 Uma linguagem que faz uma coisa bem - Kotlin (smartphones), Data Science (Python), Web (JavaScript), Infraestrutura (Go), Backend (Java)



Evolução das plataformas de desenvolvimento

¡Eu sou desenvolvedor Java!

¡Es sou desenvolvedor na linguagem Java!

¡Eu sou desenvolvedor na plataforma Java!

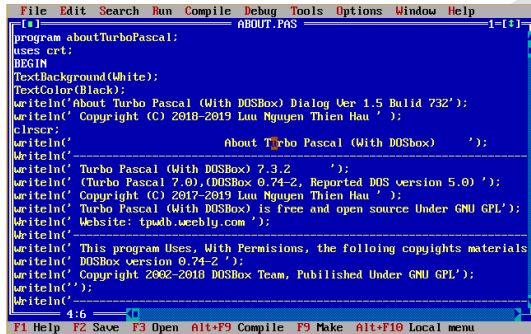
Linguagem != Plataforma

Linguagem, Plataforma

- Compilador
- Entorno de execução
- APIS e bibliotecas
- Frameworks
- Editor ou IDE

Turbo Pascal

- Compilador: Borland Pascal
- Bibliotecas e APIs: Borland -e.g. conio.h-
- Editor: Borland



```
File Edit Search Run Compile Debug Tools Options Window Help
ABOUT.PAS 1-[+]
program aboutTurboPascal;
uses crt;
BEGIN
  TextBackground(White);
  TextColor(Black);
  writeln('About Turbo Pascal (With DOSBox) Dialog Ver 1.5 Bulid 732');
  writeln(' Copyright (C) 2018-2019 Luu Nguyen Thien Hau ');
  clrscr;
  writeln('                                About Turbo Pascal (With DOSBox) ');
  writeln('-----');
  writeln(' Turbo Pascal (With DOSBox) 7.3.2 ');
  writeln(' (Turbo Pascal 7.0),(DOSBox 0.74-2, Reported DOS version 5.0) ');
  writeln(' Copyright (C) 2017-2019 Luu Nguyen Thien Hau ');
  writeln(' Turbo Pascal (With DOSBox) is free and open source Under GNU GPL');
  writeln(' Website: tpwdb.weebly.com ');
  writeln('-----');
  writeln(' This program Uses, With Permissions, the folloing copyights materials
  writeln(' DOSBox version 0.74-2 ');
  writeln(' Copyright 2002-2018 DOSBox Team, Pubilished Under GNU GPL');
  writeln('');
  writeln('-----');
  4:6
```

F1 Help F2 Save F3 Open Alt+F9 Compile F9 Make Alt+F10 Local menu

C++

- Compilador: GCC(GNU), Clang(LLVM/Apple), MSVC (Microsoft)
- Bibliotecas e APIs: C++ 11 (estadares), musl (Linux), glibc (GNU)
- Frameworks: QT
- Editor: XCode(Apple), Visual Studio (Microsoft), CLion (JetBrains), QT Creator (Digia)

Java

- Compilador: javac (OpenJDK), incremental(Eclipse JDT)
- Entorno execução: JVM -e.g. Oracle HotSpot, Amazon Correto, RedHat OpenJDK, IBM J9-, Nativo (GraalVM)
- Bibliotecas e APIs: OpenJDK (estadares) (Oracle, Google, RedHat), Maven Central
- Frameworks: Spring (VMWare), Jakarta EE (Oracle, RedHat)
- Editor: NetBeans (Apache), Eclipse (Eclipse), IntelliJ IDEA (JetBrains), VSCode (Microsoft)
- Linguagens: Java, Scala, Kotlin, Clojure, JRuby

JavaScript

- Supersets: TypeScript (Microsoft), Dart (Google)
- Entorno execução: Node (V8), Deno, Graal.js, SpiderMonkey
- Bibliotecas e APIs: ECMA, Web, NPM
- Frameworks: Express, Meteor, React (Facebook), Angular (Google)
- Editor: VSCode (Microsoft), WebStorm (JetBrains)

Python

- Entorno de ejecución: CPython (PSF), Pypy, GraalPython (Oracle), IronPython (Microsoft)
- Bibliotecas e APIs: Python PEP (PSF) PIP
- Frameworks: Django, Tornado, Pyramid
- Editor: VSCode (Microsoft), PyCharm(JetBrains),

Móvil

- Android nativo: Java, Kotlin, C++
- iOS nativo: Swift, Objective-C
- Multiplataforma web: JavaScript (Ionic, Cordova)
- Multiplataforma nativa: JavaScript (React), Java (Gluon/JavaFX), C# (Xamarin), Dart(Flutter)

Desktop

- Nativo APIs: Winforms (C#, Basic), Cocoa (Swift, Objective-C), GTK (Python, Vala, C++)
- Multiplataforma: Electron (JavaScript, TypeScript), Swing (Java, Kotlin, Scala), GTK (Python, Vala, C++), QT (C++, Python)

Backend/Dados

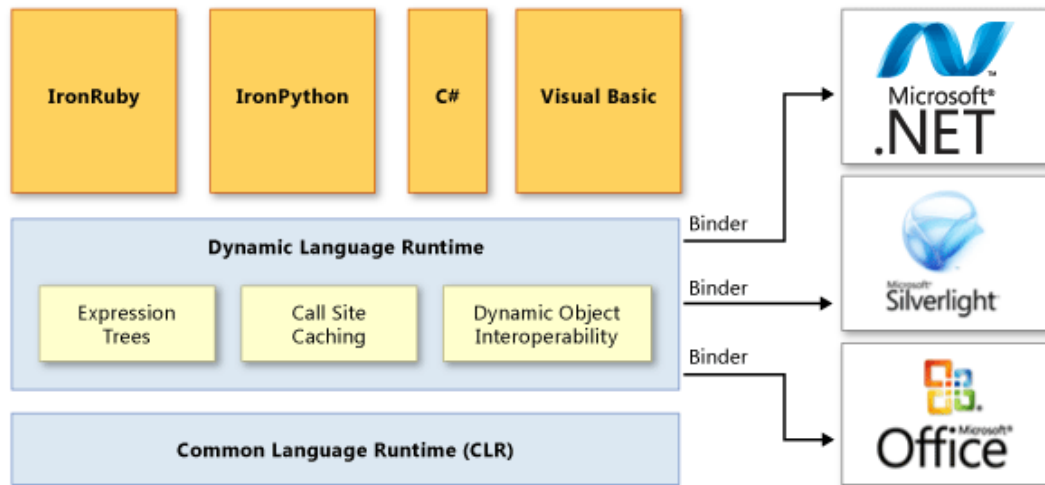
- Big Data: Spark, Hadoop, Kafka, Storm (Scala, Java)
- Data Science: Tensorflow, PyTorch, Keras (Python)
- Tradicional: Java (Spring/Java EE), PHP, .net
- Microservicios: Java (Spring Boot/MicroProfile), JavaScript (Node, Deno), .net (Core)

Desenvolver software em 2020

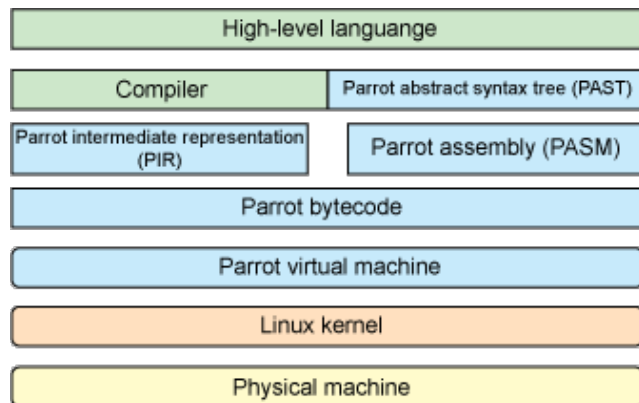
A medida que o tempo avança, vai ser mais difícil a existência de uma plataforma de proposito general, a tendencia é linguagem de proposito geral num entorno específico.

Tendencias políglotas

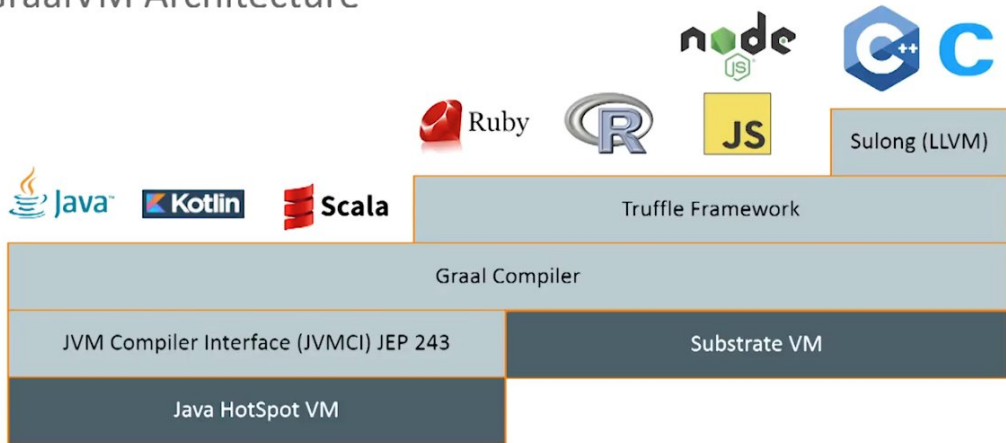
.net framework (2002)



Parrot VM (2016)



GraalVM Architecture



Microservices (Netflix)

Math Service



kubernetes

Sum Service



Mul Service



Div Service



Sub Service



Dicas para sobreviver no mundo poliglota



Dica #0:

Tem que aceitar que as linguagens são um meio de comunicação de ideias entre seres humanos e não pessoas.

Dica #1:

Contrario à algumas opiniões. Acredito fortemente que nem todas as linguagens são iguais.

Dica #2:

No final do dia, vai ser mais conveniente conseguir dominar mais do que um paradigma de desenvolvimento.

Dica #3:

As oportunidades são diretamente proporcionais em comparação com quantos paradigmas você domina.

- Strong typing: Java (C++, C#, Kotlin, Scala, Dart, Swift, Go, Rust, TypeScript)
- Dynamic typing: JavaScript, Python (Ruby, Julia, Lisp, Clojure)
- Scripting: Bash (simple), Powershell (POO)
- Manipulação de dados: SQL

 https://redmonk.com/sogrady/2020/02/28/language-rankings-1-20/?utm_sou

- 1 JavaScript
- 2 Python
- 2 Java
- 4 PHP
- 5 C#
- 6 C++
- 7 Ruby
- 7 CSS
- 9 TypeScript
- 9 C



A

Dicas no mundo poliglota - Tiobe



The screenshot shows a web browser window with the URL <https://www.tiobe.com/tiobe-index/>. The page displays a table of programming language ratings. The table has six columns: an index, the rating for July 2020, the rating for July 2019, a change indicator (green up arrow, red down arrow, or grey), the programming language name, the rating percentage, and the percentage change. The languages listed are C, Java, Python, C++, C#, Visual Basic, and JavaScript.

	Jul 2020	Jul 2019	Change	Programming Language	Ratings	Change
1	2		▲	C	16.45%	+2.24%
2	1		▼	Java	15.10%	+0.04%
3	3			Python	9.09%	-0.17%
4	4			C++	6.21%	-0.49%
5	5			C#	5.25%	+0.88%
6	6			Visual Basic	5.23%	+1.03%
7	7			JavaScript	2.48%	+0.18%

Dicas no mundo poliglota - IEEE

https://spectrum.ieee.org/ins/IEEE_TPL_2019/index/2019/0/1/0/0/1/50/1/50/1/30/1/30/1/20/1/20/1/5/1/50/1/100/1/50/

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IEEE Spectrum Trending Web Enterprise
Jobs Open Custom Mobile Embedded

Create custom ranking (Click to hide)

Language Ranking: IEEE Spectrum

Rank	Language	Type	Score
1	Java	🌐 📱 🖨	96.3
2	C	📱 🖨 📄	94.4
3	C++	📱 🖨 📄	87.5
4	C#	🌐 📱 🖨 📄	74.5
5	Swift	📱 🖨	69.1
6	Dart	🌐 📱	57.4
7	Scala	🌐 📱 🖨	55.3
8	Kotlin	🌐 📱	49.1
9	Objective-C	📱	42.9

Dicas no mundo poliglota - IEEE

https://spectrum.ieee.org/hs/IEEE_TPL_2019/index/2019/0/0/1/0/1/50/1/50/1/30/1/30/1/20/1/20/1/5/1/50/1/100/1/50/

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IEEE Spectrum Trending Web Enterprise Jobs Open Custom Mobile Embedded

Create custom ranking (Click to hide)

Language Ranking: IEEE Spectrum

Rank	Language	Type	Score
1	Python	Web	100.0
2	Java	Web	96.3
3	C	Mobile	94.4
4	C++	Mobile	87.5
5	R	Web	81.5
6	C#	Web	74.5
7	Matlab	Web	70.6
8	Swift	Mobile	69.1
9	Go	Web	68.0

Forbes

Billionaires Innovation Leadership Money Business Small Business Lifestyle Lis

39,341 views | Jul 1, 2019, 05:00am EDT

Venkat Subramaniam: Kotlin And Python Are Fun, But Java Developers Are Semantically Aligned With The Future



Alexa Weber Morales Brand Contributor
Oracle **BRANDVOICE** | Paid Program
Innovation

f Whether he's pacing the keynote stage in stocking feet, or taking
t you through "[A Dozen Cool Things in JVM Languages](#)," Venkat
in Subramaniam leaves you with a sense of exhilaration about
computer programming.

His gift for inspirational analogy is rare, and even more so because it's about software development.





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