

Hello, CSCI 5308!
Introduce you and me

About this course

- Professor Rober Hawkey and Dr. Tushar Sharma
- Is this course hard?
- Competitive coding?(Leetcode.com)
- Does it need a rich industry background?
- Lot of coding?
- Lot of Concepts?
- What are the most import thing to get this course success ?

Let's see some code first!

- What is wrong with it?

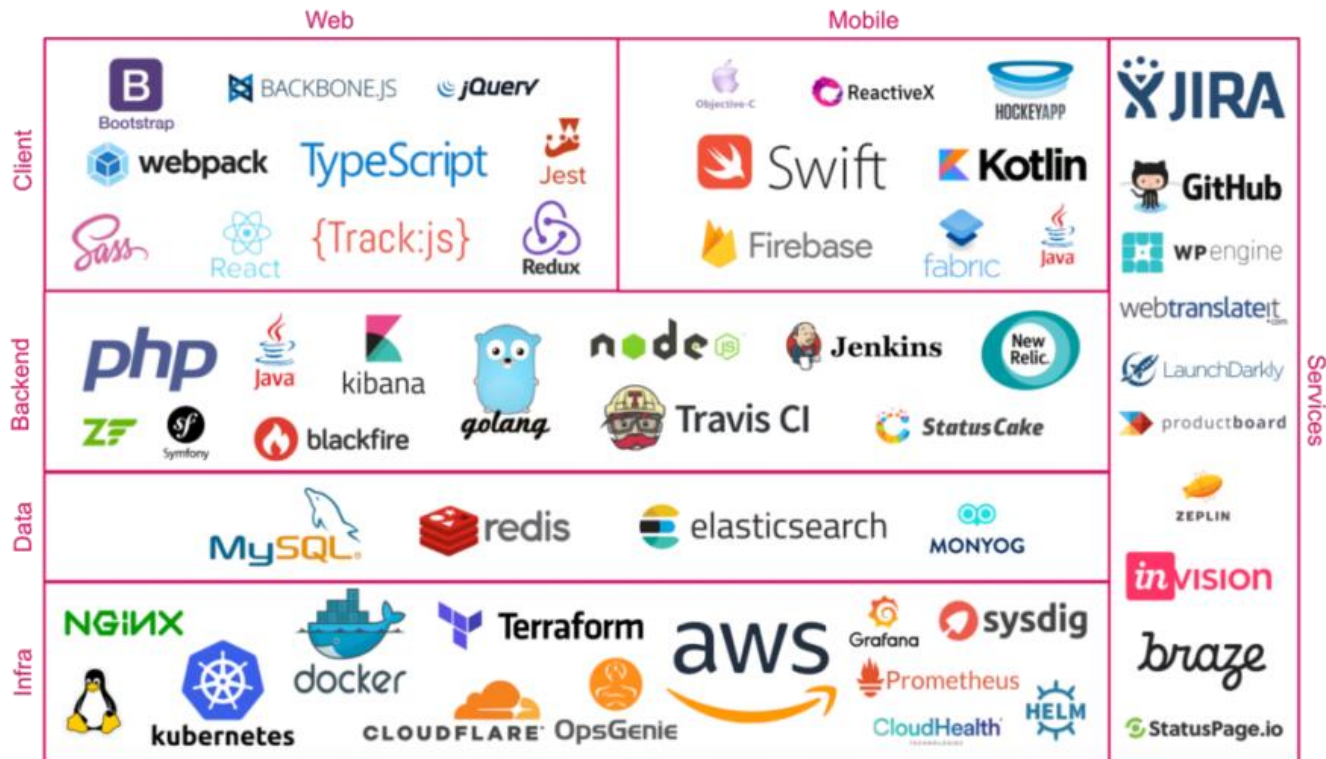
What probably will you do in the future?

- New Dev, start from ground zero.
- Maintenance
- Fixing bug
- Trouble shooting
- Add new functionalities.



Some reasons

- Technologies evolve so fast but principles and methodologies don't



Syllabus

Bright Space

Using Java (Cont.)

- How many programming languages ever invented?





Using Java (Cont.)

Over 8000!!

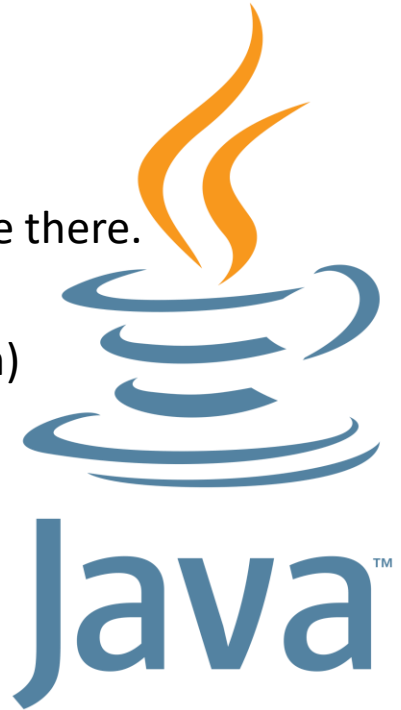
Using Java (Cont.)

- One of the most popular and highly demanded languages in the job market.
(TIOBE Index, Stack Overflow)

Apr 2023	Apr 2022	Change	Programming Language		Ratings	Change
1	1			Python	14.51%	+0.59%
2	2			C	14.41%	+1.71%
3	3			Java	13.23%	+2.41%
4	4			C++	12.96%	+4.68%
5	5			C#	8.21%	+1.39%
6	6			Visual Basic	4.40%	-1.00%
7	7			JavaScript	2.10%	-0.31%
8	9	⬆		SQL	1.68%	-0.61%
9	10	⬆		PHP	1.36%	-0.28%
10	13	⬆		Go	1.28%	+0.20%

Using Java (Cont.)

- One of the best PL for OO programming.
- One of the best PL for large projects.
- Many systems written in java in large organizations will still be there.
(Maintenance, date legacy code)
- Still in development with high velocity (release every 6 month)



Tools and Technologies

- Notepad is good but we have better ones. (Even word, powerpoint can!)
- Eclipse
- IntelliJ
- Git
- GitLab
- Jira
- Mysql
- Tomcat



Tools and Frameworks

- JUnit5
- Mockito
- Selenium
- Log4J2
- SLF4J
- Maven
- Gradle
- Springboot



Java Interface and Abstract Class

- What is interface
- What is abstract class
- What are the differences
- Why we need them and why they are important

<https://dal.brightspace.com/d2l/le/content/271676/viewContent/3610344/View>

Cost of bugs and bad programming

- Discussion



Cost of bugs and bad programming

- Y2K

Uncle Bob 's video

<https://www.youtube.com/watch?v=p0O1VVqRSK0>