Topic 0

CS2212B-2017 Introduction

What is this course about?

Essentially:

- Migration from individual to team coding
- Application of principles and practices from traditional engineering to software development

This course is more about the **process** than the **product.**

What will I get from this course?

- Gain an high-level understanding of traditional and modern software engineering methods.
  - A bit of a history lesson, in some cases.
  - Necessary to understand where the field has been and where it is headed.

- Gain hands-on experience with modern, relevant development methodologies and tools as a team.
  - i.e. actual skills you can put on your C.V.

What will I get from this course?

Creativity, motivation, organization, teamwork, leadership, …

Not just buzzwords, but real ‘soft’ skills you can focus on developing.

What will I get from this course?

If you work hard, satisfy the objectives, and mesh with your team, you will get a good grade for this course.

Additionally, we will be organizing a pitch competition at the end of the course.

- For the entrepreneurially-minded
- Competitive
- Not for marks
- Details to come…

What tools will we be using?

The primary programming language for the course is **Java**.

However, much of software development has moved away from desktop applications. For increased marks, teams are recommended to develop a **web-based front end** for their project.

In this course, we will be using **Grails**, which is based on the **Spring Framework**, for a variety of purposes. More on this later.

What tools will we be using?

GitHub

How will we be evaluated?

Quizzes (5%)

- Discussed in class, to be completed/submitted on OWL.

Tutorials (10%)

- Tutorials will be held during lectures on specific topics. An OWL submission will be required after each tutorial.

Final Exam (30%)

- Final Exam to be scheduled by registrar.
- Covers both theoretical and practical aspects of the course.

Team Project (55%)

- Major team project to be completed in 4 phases.

Team Project

In teams of 8 to 10 people, you will **design**, **prototype**, **implement**, and **release** a large software project.

- Teams will be assigned
- You will choose your own projects (with our help/permission)
- To be completed in 4 phases

Team Project

As a group, you will have the opportunity to choose your own project.

Alternatively, you may request to be **assigned a project**.

If, as a group, you **fail to propose a satisfactory project**, you will be assigned an alternate or modified project.

Team Project

Stage 0

By Midnight on **January 18th**, you must organize, meet as a team, and discuss your choice of project.

You will submit a high-level project proposal of at most one page.

You must also choose 3 or 4 members who will be your team's primary contacts for your TA and include their names and e-mail addresses.

Team Project

Meetings

You will also schedule two types of weekly meetings:

- A general meeting so all group members can attend if possible.
  - Approximately 1 hour
- A meeting of 3 or 4 members of your team and your team's TA
  - TA allocated for 30 minutes per week
  - The general and TA meetings may coincide/overlap (recommended)
  - You must work with your TA to schedule a weekly meeting time

At every meeting, minutes must be recorded and archived. These must be submitted with your project. If you're not sure how… LMGTFY

Team Project

Meetings

You can book meeting/collaborative space in Middlesex College with Cheryl in the CSD main office (preferred for TA meetings).

There are also several spaces that you can book through the Western Libraries for general team meetings:

https://www.lib.uwo.ca/services/studyspace.html

Team Project

Meetings

The first meetings with TAs will take place during the week of January 23rd to 27th.

During this meeting, your TA will **assign your project**.

You will then have at least 2 weeks to complete **Stage 1**.

Team Project - Examples

Last Year's Project – Fitbit Dashboard

- Integrated with **Fitbit API** to create custom desktop application with step, calorie, heart rate, and distance information presented to users with **intuitive interface**. Used an **accolades/awards system** to track and reward user's fitness activity.

Key Technical Features:
API Integration, User Authentication, Data Analysis and Visualization, User Goals, Graphical Interface

Team Project - Examples

An idea for this year – Market Analysis

- Visualization and tracking tools (e.g. track combinations of stocks, set price alerts, etc.)
- A gamified mock investing tool to "play the markets"
  - Goals, challenges
  - Could be based on historical data or new data
- Advanced: Make automated predictions based on data mining from Twitter, Reddit, other sources.

Key Technical Features:

- API Integration, Timeseries Data Analysis, User Goals, Database and Transactions, Graphical Interface, User Authentication, etc.

Team Project - Examples

More details about your project, other ideas, and links to past project specifications will be posted on the course website.

Project Stages

Stage 0 – Team formation, project proposal, project assignment

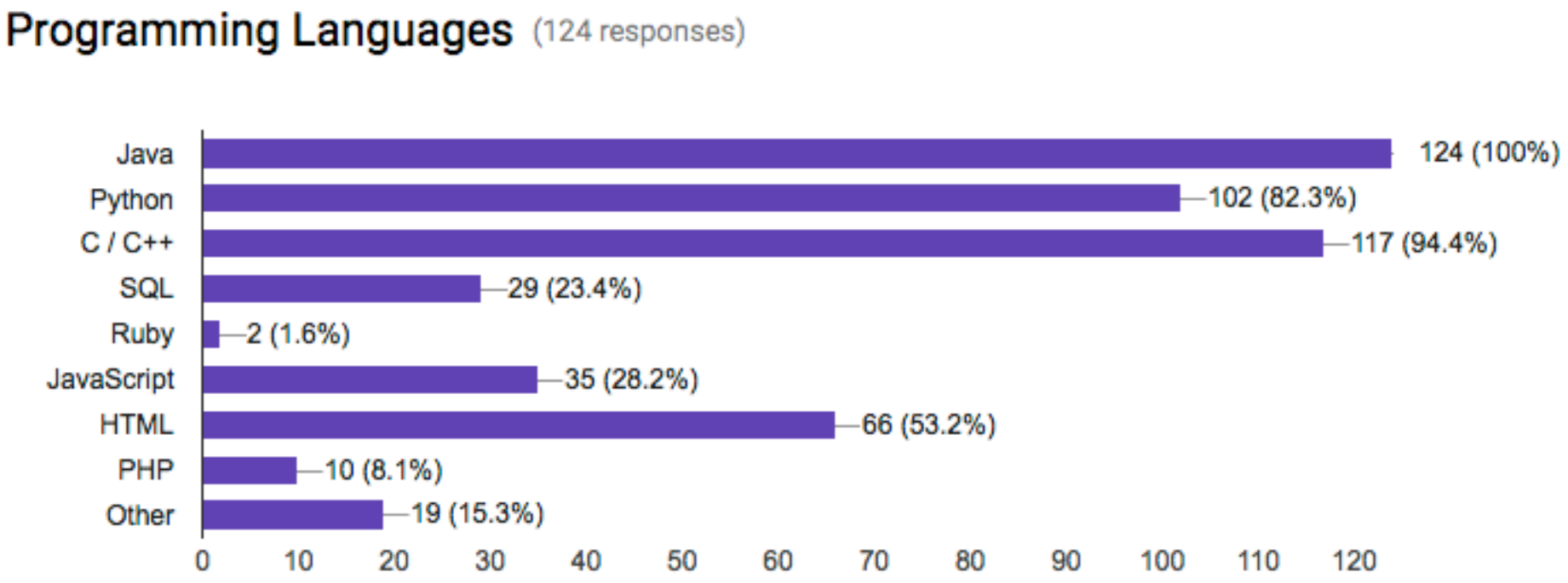
Stage 1 – Website, feature description, project plan, user stories

Stage 2 – Prototyping, UML diagrams, software design page

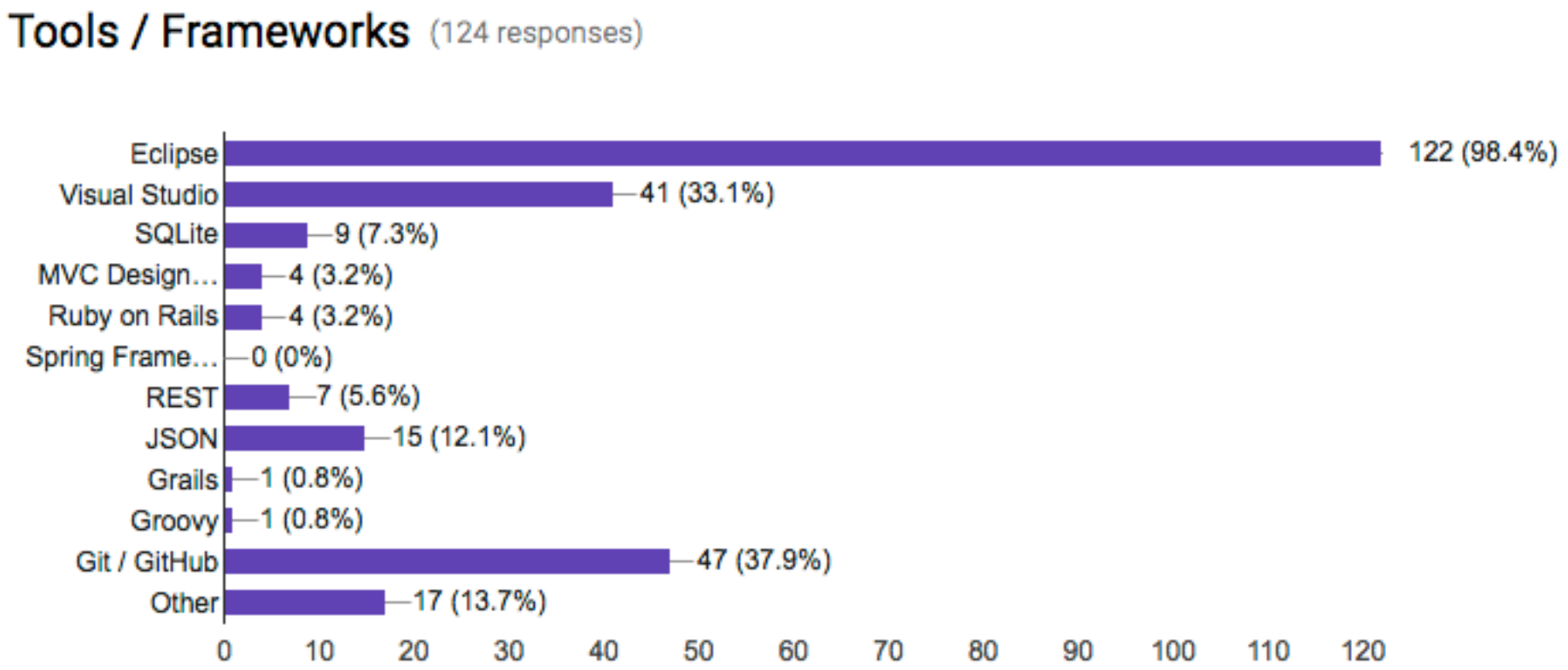
Stage 3 – Program submission

Stage 4 – Documentation, demonstration, acceptance testing

Team Formation



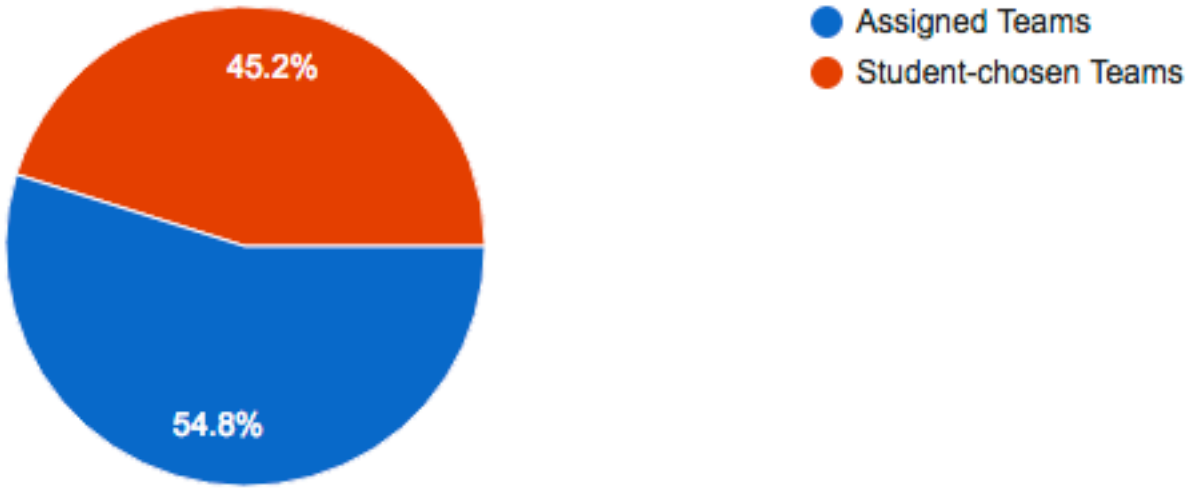
Team Formation



Team Formation

Would you either prefer for teams to be assigned by course staff, or for teams to be allowed to form themselves?

(124 responses)



Team Formation

From course outline:

Individual students may submit requests to be taken out of the team to which they were initially assigned, if such requests are received by Friday January 20th, and a good reason (such as a prior conflict with one of the team members) is given. Individual students may not specify to which team they want to be assigned instead; the instructors will choose an appropriate team.

Team Formation

Teams:

It is your responsibility to ensure all team members check in.

Use OWL to get started. Migrate to GitHub, other collaborative tools as soon as possible. Consider using Slack or similar for discussion.

GitHub will be your primary tool for project collaboration.

You must add your TA and Ethan to any collaborative tools you use. We will be monitoring your progress and will intervene in cases of inappropriate use.

Team Formation

Use the rest of our time today to say hello to your teammates!

- Your first task should be to delegate a team member to get things rolling on OWL and set up a discussion tool.
- Talk about setting up a first meeting. Doodle polls are great for this.