

CS304

Software Engineering

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Welcome to the first lab!

Objective today:

- Get to know your classmates for the class project
- Learn about roles in software development teams
- Play a game on Flame of Open Source (useful intro to the project)

Let's play a game

- Many roles exist in a software development team
- How to play?
 1. Learn about the responsibilities for each role
 2. Decide which role you want to play
 3. Answer interview question about each role
 1. **Do not search online for answer!**
 4. Decide which role you want to play based on your suitability

Which roles do you want to be?

- Software Engineer
- Software Engineer in Test
- Technical Project Manager

What do Software Engineer do?

- Responsibilities:
 - Designing and coding tools.
 - A team player who works well in a collaborative environment with peers in other development disciplines, Quality and Program Management.

What do Software Engineer in Test do?

- Responsibilities:
 - Build advanced automated test suites to exercise our applications.
 - Work with the development and test engineering teams to automate testing.
 - Conduct research on emerging technologies.
 - Analyze and decompose a complicated software system and design a strategy to test this system.

What do Technical Project Manager do?

- Responsibilities:
 - Lead project as technical architect in initiation phase to conclude right approach with several team
 - Work as project manager to make project through collaboration with development manager and product manager
 - Involve in multiple project executions simultaneously

Which role you want to be?

Discuss with your classmates sitting around you

- Why you want to be ...?
- Do your classmate think that you are suitable?

Discuss around ~5 minutes

Which role you want to be?

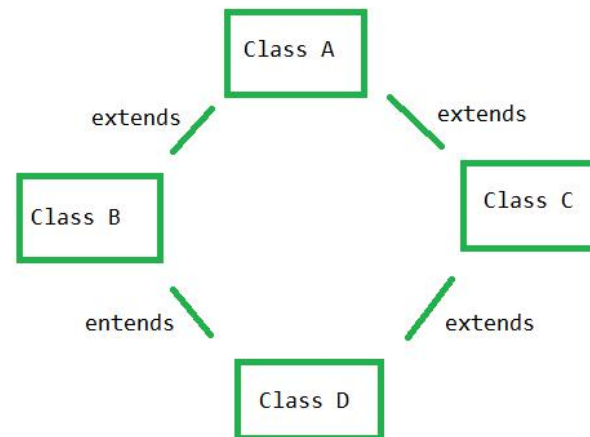
- How many of you want to be a Software Engineer?
- How many of you want to be a Software Engineer in Test?
- How many of you want to be a Technical Project Manager?

Now try answering interview questions for all roles..

Software Engineer

A real interview quick question I get when I was a student:

- **Does Java support Multiple inheritance?**



Discuss around
~2 minutes

Software Engineer In Test

Interview Question:

- Write test cases for adobe reader

Discuss around
~10 minutes

Technical Project Manager

Interview Question:

- Choose a Google/Microsoft/Tencent/Apple product and talk about it, what do you like about it, what would you improve.

Discuss around
~10 minutes

Which role you want to be now?

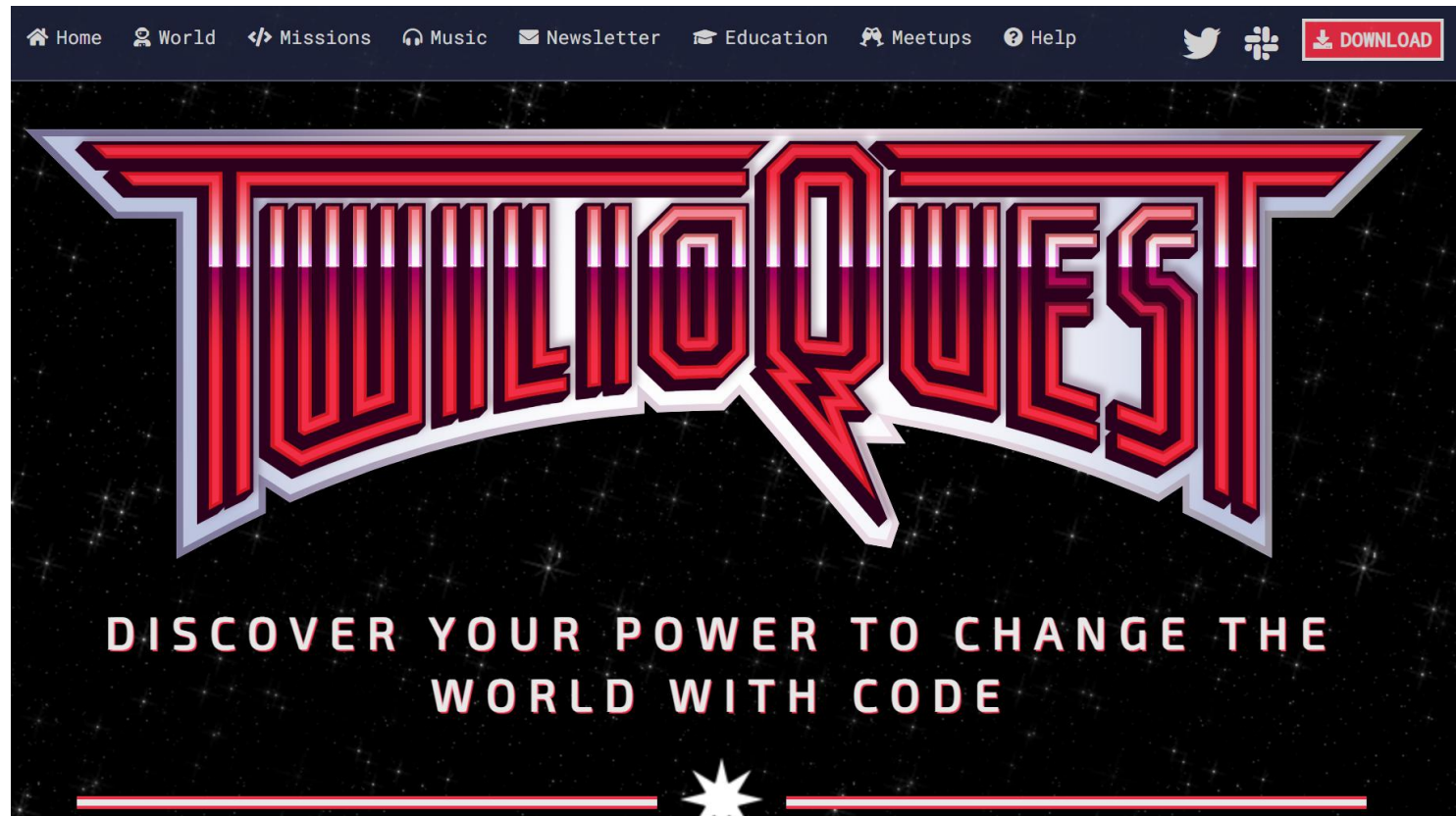
Discuss with your classmates sitting around you

- How many of you want to be a Software Engineer?
- How many of you want to be a Software Engineer in Test?
- How many of you want to be a Technical Project Manager?

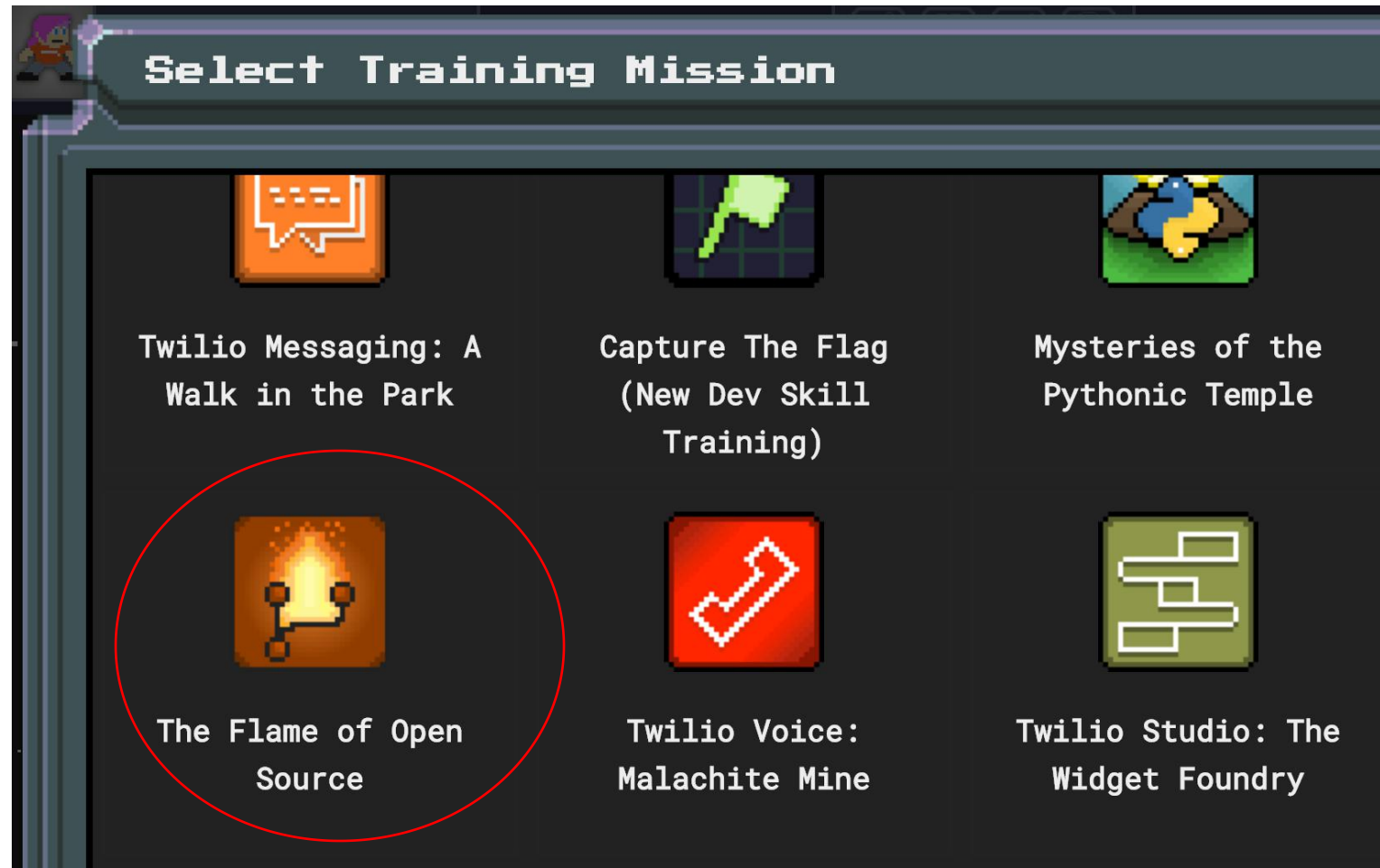
Part 2 – Flame of Open Source Game

TwillioQuest Game

- Download the twillioQuest game!
- <https://www.twilio.com/quest>



Select The Flame of Open Source



First Step

- Create a GitHub account



Second Step

- Create a fork

The screenshot shows the GitHub interface for the repository `stan6 / open-pixel-art`, which is a fork of `twilio-labs/open-pixel-art`. The repository has 0 stars and 2.3k forks. The main content area displays a list of files and their commit history:

File	Commit Message	Time Ago
<code>.github</code>	chore: update bots	10 months ago
<code>.vscode</code>	feat: initial commit	14 months ago
<code>__tests__</code>	fix(danger): update dangerfile script to check before/after (twilio-l...	4 months ago
<code>_data</code>	feat(pixels): add my new pixel please (twilio-labs#2963)	8 hours ago
<code>assets</code>	fix(party): adjust canvas size for party mode (twilio-labs#1937)	9 months ago
<code>docs</code>	docs: add dutch translation for CONTRIBUTING.md (twilio-labs#1778)	12 months ago
<code>scripts</code>	chore: add merge driver (twilio-labs#991)	13 months ago
<code>styles</code>	feat: add Avatar Toggle (twilio-labs#1081)	13 months ago

On the right side, the 'About' section describes the project as a collaborative pixel art project to teach people how to contribute to open-source, with a link to `open-pixel-art.com`. The 'Releases' and 'Packages' sections indicate that no releases or packages have been published yet.

Third Step

- **Install git**
 - <https://git-scm.com/book/en/v2/Getting-Started-Installing-Git/>

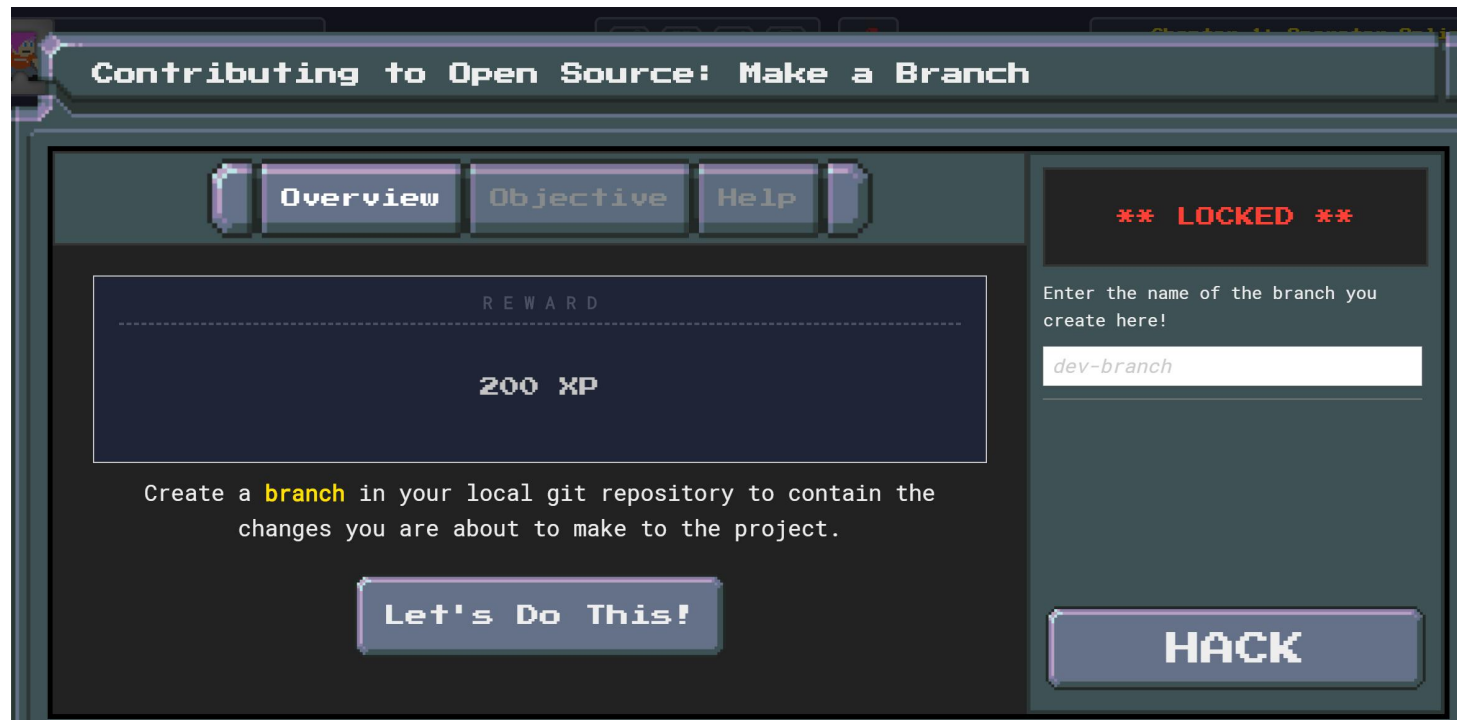
4th Step

- Clone the open-pixel-art repository according to the game



Fifth Step

- Make a branch according to the game



Sixth Step

- Make your first contribution!

