Individual VG Assignment

General requirements

The assignment should:

1. Be done individually.
2. Result in tangible outputs such as code, configuration files, or similar artifacts, ensuring that it's not purely theoretical. All produced files must be committed to your VG Assignment repository.
3. Take approximately 1-2 days to complete.
4. Focus on expanding your knowledge in areas not previously covered in regular lectures or the group assignment, adding depth to your understanding of CI/CD concepts.
5. Include drawing conclusions from your practical work, focusing on assessing the pros and cons of different CI/CD methods and tools, or comparing various methodologies.
6. Be presented in one of two ways: either as a slide presentation in front of the class or as a written report. Whichever format you choose, tailor the content for an audience of your peers who have also taken this course, ensuring the level of explanation is appropriate for their understanding.

Presentation

If you choose the option of presenting to the class:

1. The aim of the presentation is to enjoy sharing the knowledge you've acquired with your peers in a supportive setting. All questions asked will be out of genuine curiosity and a desire to learn more, not to challenge or embarrass anyone.
2. If multiple students select the same topic, one will be randomly selected to present to the class, while others will show only to the educator.
3. Only select this option if you are willing to present to the entire class.
4. Create 3-5 slides for a 5-10 minute presentation.
5. Ensure at least one slide includes a screenshot, a configuration example, or similar visual aid relevant to your project.
6. Add your presentation to the root of your VG Assignment repository as a PDF file named presentation.pdf.

Report

If you choose to write a report:

1. Aim for a 3-5 pages long report, with a word count of 700 to 1500 words.
2. Follow the structure and style recommended in Informal Technical Reports.
3. Add relevant screenshots, configuration files, and code examples to your report to provide more precise explanations.
4. Add your report to the root of your VG Assignment repository as a PDF or Markdown file, naming it report.pdf or report.md.

A few ideas

These project suggestions are meant to inspire or be used as-is. But remember that this is your chance to create an idea and explore a CI/CD aspect you're particularly interested in for a more personalized study.

- Set up a local [TeamCity Professional](#), [concourse-ci](#), or another CI server (including those offering a 14-day trial period) and port the group assignment pipeline to work with your selected platform. Conduct a comparison of its functionality and user experience with Jenkins.
- Port the group's GitHub Actions to two alternative platforms, such as GitLab or BitBucket, as porting to just one may not require 1-2 days.
- Develop a GitHub integration, such as a bot, or explore an innovative application using GitHub's REST API.
- Investigate an alternative to Docker and compare its features, performance, and usability with Docker.
- Conduct a comparison between Git and Mercurial, evaluating their features, workflows, and overall usability.
- Delve into Kubernetes, going beyond the course content to gain a deeper understanding of its architecture, functionalities, and advanced use cases.
- Investigate proprietary solutions offered by major cloud providers that address the same challenges as Kubernetes, analyzing their unique features and how they compare to Kubernetes.

Let's go!

1. Develop an idea that meets the above general requirements. You can discuss your ideas with your educator for guidance.
2. Accept the [CI/CD Individual VG Assignment on GitHub Classroom](#) and clone the repository.
3. Complete the Individual_VG_Project_Plan.md in your repository and submit a pull request for approval to kent@c8.se. Only start working on your project after your plan is approved.
4. ***Work work work***
5. For eligibility, <u>ensure that the group assignment is completed and submitted on time</u>. Once this criterion is met and your presentation or report review is successfully completed by the 30th of November, you will qualify for a VG grade.