

Assessment event 1 of 3: Knowledge

Criteria

Unit code and name

ICTICT449 | Use version control systems in development environments

Qualification/Course code and name

ICT40120 | Certificate IV in Information Technology

Student details

Student name

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Student number

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Assessment instructions

Table 1 Assessment instructions

Assessment details	Instructions
Assessment event overview	<p>The aim of this assessment event is to assess your knowledge and performance in</p> <p>This assessment is in 3 parts:</p> <ul style="list-style-type: none"> • Part 1: Create a GitHub Git • Part 2: Questions • Part 3: Git Manual <p>And is supported by:</p> <ul style="list-style-type: none"> • Assessment feedback <p>Note: This assessment may contain links to external resources. Access to the long URL is provided via the Error! Reference source not found. section located at the end of this document.</p>
Unit assessment guide	<p>Refer to the unit assessment guide (UAG) before attempting this assessment event. The UAG contains information including assessment requirements and how to achieve a satisfactory result.</p>
Submission instructions	<p>When you complete this assessment, submit it for marking:</p> <ul style="list-style-type: none"> • keep a copy of all the electronic and hardcopy assessments you submit to TAFE NSW • make sure you have completed the assessment declaration before you submit.

Part 1: Create a GitHub Git

1. On Github.com create a public GitHub repository.
2. The questions in this assignment must be answered in Markdown (*.md files) and placed in this repository.
3. In the repository there must be a README.md that links to your other pages for the other parts of this assignment.
4. Each Assignment Part must be in its own folder and named “partx” X being the part number.
5. There must be 3 branches called main, staging, development.
 - a. Do not work directly in your main branch, answer your questions in Development.
 - b. Do not work directly on github.com, write the answers in your local repository.
 - c. Once you are ready, merge your work from development into staging.
 - d. If you have merged into staging correctly, then merge staging into main.
6. Create an Issues, Discussions, Wiki using tools provided by github.com
7. Ensure your commit messages are meaningful.

Confirming your GitHub project:

1. Provide your teacher your git URL once you have created it.
 - a. They will make a pull request, please respond, and allow changes.
2. Create a file called changes.md
 - a. Locate the changes the teacher made .
 - b. Inside of changes.md, list what was changed.
 - c. Inside of changes.md, explain how you found those changes?

Part 2: Questions

Answer these questions in a Markdown file and link it to your README

1. List three major version control for software engineering.
2. What are the main advantages to using Git in your software development, and how is it useful for game developers.
3. Define the following terms in relation to Git. Branch, Pull, Push, repository, working copy, merge
4. If you are working at a company, which of their policies and procedures might relate to using version control systems such as Git.
5. Merge conflicts can occur while using git. List merge tools or diff tools you can use to help you merge and deal with conflicts.
6. In a merged source code file, how does Git let you know there is a conflict?
7. What are the steps you can take to resolve Git conflicts?
8. What does git revert do, and how can you use it?
9. What does git reset do, and how can you use it?
10. What is the difference between git revert and git reset?
11. True or False: It is okay to commit broken code to the main branch.
12. True or False: You should commit related changes. For example, fixing two different bugs should produce two separate commits.
13. Describe what is DevOps, how is it useful for game developers?
14. List what tools can be used with DevOps. Give a brief description of each one. (at least 3)
15. What is CI/CD and how can it be used to automate the game development process?

Part 3: Git Manual

Answer these questions in a Markdown file and link it to your README

Imagine you are working at a game studio, and they want you to help with installing Git.

1. Write instructions on installing git on a windows system. Making sure to include
 - a. What are the requirements to install Git on a system.
 - b. If you had issues installing Git the workplace, give instructions on who you could you enquire about the installation disruption.
2. Do research on some principles/techniques of industry standard best practices creating and working with repositories and branches in Git.
 - a. List the most important principles/techniques for creating and working with repositories
 - b. List the most important principles/techniques for creating and working with branches
3. List the steps in a Git workflow that the team should follow when working on projects.

Submit

Submit your assessment on Moodle, you will require a link to your git, and if there is any, documentation as a PDF.

You will receive any feedback on Moodle, respond to feedback, and resubmit the assignment with any changes

This page is not required for online assessment submissions.

Student assessment declaration

This assessment is my original work and has not been:

- copied from any source without proper referencing
- written for me by any other person except where such collaboration has been approved by a teacher or assessor.

Student signature and date

Reasonable adjustment

☐ Reasonable adjustment was in place for this assessment event.

If so, please provide details of any reasonable adjustment strategies that were implemented:

[Insert reasonable adjustment strategies]

Assessment outcome

☐ Satisfactory ☐ Unsatisfactory

Comments

[Insert comments]

Assessor name, signature, and date

Student acknowledgement of assessment outcome

[Would you like to make any comments about this assessment?]

Student name, signature, and date