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**Worksheet Evidence:**

This worksheet requires some answers to questions and **at least three selectively captured screenshots** as evidence. The aim is to be able to learn from the exercise, and evidence that.

**For each of your three selected screenshots (or sequence of shots) in a brief paragraph or two reflect on:**

* Why you have selected it?
* What have you learnt in this part of the worksheet?
* What was new or surprising?
* What useful external resource(s) did you consult and why? Provide a link(s) to the resource.

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| **Evidence** | **Check** |

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| 1. **What is the purpose of Git and GitHub?**   Git is a distributed version control system designed to track changes in source code during software development on a local machine. It allows developers to record history, revert to previous states, and work on independent branches. GitHub is a cloud-based hosting service for Git repositories. It provides a centralized platform for storing remote repositories, facilitating collaboration through features like pull requests, issue tracking, and code review. |  |
| 1. **Explain the difference between a local repository and a remote repository in the context of Git and GitHub.**   A local repository resides on an individual developer's computer. It contains the complete project history and all branches, allowing full version control operations (commits, branching) to be performed offline. A remote repository is hosted on a network or internet server, like GitHub. It acts as a central store for sharing code, backing up work, and enabling team collaboration. Developers use git push to upload local changes to the remote and git pull to download others' changes from the remote to their local repository. |  |
| 1. **What is the role of README.md file in a GitHub repository?**    The README.md file serves as the primary documentation for a GitHub repository, written in Markdown format. Its role is to introduce the project (name, purpose, features), provide essential instructions for installation, setup, and usage, explain how others can contribute, and act as the front page of the repository to attract users and collaborators. A good README is crucial for project understanding and adoption. |  |
| 1. **Explain the purpose of creating branches in GitHub. A screenshot(s) to support your answer may be suitable to show your “Development” branch.**   Creating branches in Git/GitHub allows developers to isolate work without affecting the main codebase (e.g., the main branch). Key purposes include: developing features, fixing bugs, or experimenting with ideas in a contained environment; enabling multiple developers to work on different tasks simultaneously without conflicts; and facilitating code review and discussion through pull requests before changes are integrated into the main branch. |  |
| 1. **Explain the steps you took to merge your changes to the main branch on GitHub. A screenshot(s) to support your answer may be suitable.**   1. I made changes and committed them to a Development branch locally. 2. I pushed the Development branch to GitHub (git push origin Development). 3. On GitHub, I navigated to my repository and clicked the "Compare & pull request" button prompted for the newly pushed branch. 4. I created a new pull request (PR), specifying the Development branch as the source and main as the target. I added a title and description explaining the changes. 5. I (or a collaborator with review permissions) reviewed the changes diff in the PR. 6. Finally, I clicked the "Merge pull request" button to merge the commits from the Development branch into the main branch. |  |
| 1. **Provide an example of one of your commit messages, adhering to a commit message standard. A screenshot here may be suitable.**   feat(auth): add user login endpoint with JWT validation  Explanation: This follows the Conventional Commits standard. feat indicates a new feature. The optional scope (auth) specifies the module affected. The message succinctly describes what was added and the technology involved (JWT). |  |
| 1. **What is the "create-react-app" script used for? A screenshot(s) to support your answer may be suitable to evidence your successful creation of the cise-react-learn React application.**   The create-react-app script is a officially supported command-line tool used to bootstrap a new modern single-page React application. It automatically sets up a sophisticated build environment with pre-configured tools like Webpack, Babel, ESLint, and a development server. This allows developers to start coding React immediately without the complex and time-consuming process of manually configuring the build tools themselves. |  |
| 1. **What are the roles of the package.json and .gitignore files in a React application?**   package.json: Manages the project's metadata, dependencies (lists all 3rd-party libraries required for the project to run and develop), and scripts (defines executable commands like npm start or npm run build). .gitignore: Tells Git which files or directories to intentionally exclude from version control. In a React app, this is crucial for ignoring the node\_modules/ folder (as dependencies can be reinstalled with npm install), build outputs, environment variable files, and editor configurations to keep the repository clean and efficient. |  |
| 1. **Explain the purpose of a pull request in GitHub. A screenshot(s) to support your answer may be suitable, to evidence the open pull request for merging the "LogoLink" branch with the Development branch.**   A Pull Request (PR) is a core collaboration feature on GitHub. Its primary purpose is to propose and discuss changes before they are merged into a branch (usually a main branch like main or develop). It initiates a code review process where team members can comment on the changes, suggest improvements, and ensure code quality and standards are met. It serves as a formal mechanism for integrating contributions into a project, providing transparency and a clear history of why changes were made. |  |
| 1. A screenshot(s) to support your answer may be suitable to evidence the successful creation of a new project using NEST CLI and running of the NEST application. |  |
| 1. A screenshot(s) to support your answer may be suitable to evidence changes you made to the getHello() function in the src/app.controller.ts file of the NEST application and the updated message in the browser. |  |