DWA_01.3 Knowledge Check_DWA1

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1. Why is it important to manage complexity in Software?

- Complexity Influences project planning and control; it can hinder the clear identification of goals and objectives, it can affect the selection of an appropriate project organization form, or it can even affect project outcomes.

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2. What are the factors that create complexity in Software?

- Dynamic nature of software development, changing requirements, technical challenges, team management, budget constraints, and timeline pressures.

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3. What are ways in which complexity can be managed in JavaScript?

- Modularization: Break your code into smaller, manageable modules.Each module should have a specific responsibility or functionality.

- Comments and Documentation: Documenting your code, including the purpose, Behavior, and usage of functions and modules, can help others (and yourself) Understand and work with complex codebases.

- Proper Naming Conventions: Use meaningful and descriptive names for Variables, functions, classes, and modules.

- Error Handling: Implement proper error handling mechanisms, such as try-catch Blocks, to handle and manage exceptions.

- Testing: Implement unit tests, integration tests, and end-to-end tests to ensure your code behaves as expected and to catch bugs and regressions.

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4. Are there implications of not managing complexity on a small scale?

- Yes, Readability and Maintainability: Code that is not property organized and lacks modularization can become difficult to read and understand. This can make it challenging to maintain or modify the code in the future, leading to bugs, Errors, and inefficient development processes.

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5. List a couple of codified style guide rules, and explain them in detail.

- CamelCase:
  naming convention where each word starts with a capital letter
  (except the first word), and there are no spaces or underscores between the Words.
  By adhering to this rule, code becomes more readable and consistent throughout the project. It improves code maintainability and helps developers easily Distinguish between variables and functions.

- Commenting and Documentation:

  Comments and documentation play a vital role in helping developers understand the purpose and functionality of code.

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6. To date, what bug has taken you the longest to fix - why did it take so long?

- It took me 2 days to find a bug which was incorrect import syntax because I forgot to specify a relative path when importing local files.

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