DWA_01.3 Knowledge Check_DWA1

---

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

Maintainability to make it easier to maintain,update and extend .
Readability makes it easier to read .

Managing the complexity can reduce the occurrence of bugs and makes debugging more efficient .

Managing complexity as well helps in performance because well managed code tends to be more efficient .

Managing complexity ensures that the software grows and scales effectively .

---

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

Tight coupling, especially when different parts of the code are tightly coupled .

Poor naming conventions, especially unclear and inconsistent naming of variables ,functions and classes .

Code duplication , repeating code across different parts of the application .

Excessive abstraction , especially overly obstructed code may be challenging to understand and maintain .

_____

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

Modularity, when breaking down the code into smaller reusable modules using functions and classes to encapsulate logic .

Use of abstraction to hide unnecessary details and make the code more manageable .

Refactoring the code regularly reviewing and improving code structure to reduce complexity .

Use of code comments and documentation .

Following consistent and descriptive naming conventions for variables, functions and classes .

_____

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

Maintenance difficulties especially when the codebase grows.

Takes time to debug the code and that it is time consuming .

_____

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

Indentation and white space rules
Use consistent indentation for blocks of code and maintain proper white space between operators , functions and classes .
This makes the code readable .

Naming conventions
Follow descriptive and meaningful naming conventions for variables ,functions and classes .
Using clear and meaningful names makes the purpose of variables , functions and classes evident, improving the code readability and understanding .

_____

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

My previous tsk ,
It took me five days to fix it ,
There was no comments so it was difficult to read it , incorrect assignments and invalid operators .

_____