**Navigating the generative AI landscape in software development**

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GitHub repository link:

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*Insert as required*

# Research study findings

## Task 2: Code generation and evaluation

* 1. **Tool selection**

Ensure that you identify the Generative AI platforms selected, provide appropriate references and your rationale for the platform(s) that you selected

* 1. **Problem description**

Describe the problem / development task that you asked the generative AI platform to create a solution for.

* 1. **Code generation and documentation**

Record the prompts that you used and the output from the AI platform. You can add these as screenshots if necessary.

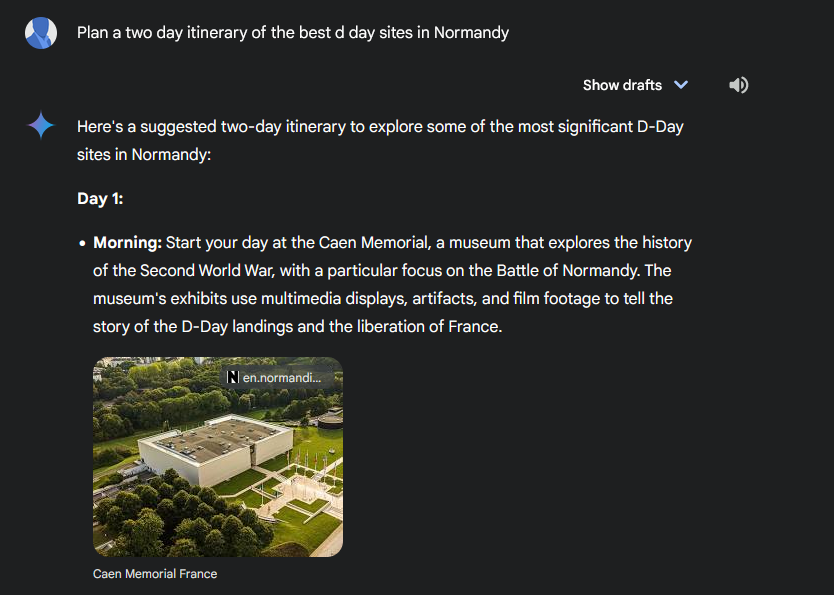


Figure Screenshot of the first prompt used to generate initial code for the programming task

* 1. **Evaluation of the AI generated code**

Ensure you comment on the following aspects of the code:

* + **Functional correctness:** does the generate code preform the intended task correctly?
  + **Efficiency:** is the code optimised for performance?
  + **Comprehension, correctness and readability:** Does the code meet established code review and style requirements? See: <https://abseil.io/resources/swe-book/html/ch09.html> and <https://google.github.io/styleguide/>
  + **Security:** Does the code introduce any potential security vulnerabilities?

In evaluating the AI generated code describe the approach you took to answering these questions.

* 1. **Code refinement**

Provide a summary of any changes you made to the code based on your evaluation of the AI generated code and associated comments and documentation.

## Task 3: AI assisted testing and debugging

* 1. **Generating tests**

Record the prompts that you used and the output from the AI platform.

* 1. **Bugs**

Provide a summary of the bugs that you introduced into the codebase.

* 1. **Evaluation of AI platform to bug identification and remediation**

Ensure you document how effective your selected generative AI solution was in:

* Identifying the bugs you introduced.
* Efficiency in solving the bugs.
* Reliability

## Task 4: Reflection and commentary

Based on the completion of assignment tasks 1, 2 and 3 highlight major insights on the use of Generative AI in the completion of this assignment so far. Suggested topics may include:

* Effectiveness and reliability of the platform in the creation and testing of the required code.
* Ethical considerations and bias.
* Challenges and limitations.
* Mitigation strategies for the risks, challenges and issues identified.

# References

Ensure that you format references correctly (Harvard, IEEE or ACM) and provide full and complete references.