`Makefile` task

Task Description

You are required to create a `Makefile` for a payment application project. The `Makefile` should handle the compilation and linking process, generating output files in the "build" directory and the binary executable in the "bin" directory.

Requirements

1. Create a `Makefile` named "Makefile" in the root directory of the project.

2. The `Makefile` should have at least two targets: "all" and "clean".

3. The "all" target should be the default target that compiles the source code and generates the binary executable.

4. The source code files should be located in a directory named "src" within the project's root directory.

5. The include files should be located in a directory named "inc" within the project's root directory.

6. The object files should be placed in the "build" directory.

7. The binary executable should be placed in the "bin" directory.

8. The `Makefile` should handle dependencies and recompile only the necessary files when changes occur.

9. The `Makefile` should use appropriate compiler flags and options for compilation, such as enabling warnings and specifying the output directories, e.g., `-Wall` and `-Werror`.

10. The "clean" target should remove all generated object files and the binary executable from the "build" and "bin" directories, respectively.

11. The `Makefile` should provide a way to clean the project by invoking the "clean" target.

12. The `Makefile` must make use of make automatic variables, pattern rules (explicit and implicit), and built-in functions.

Submission

You should submit the `Makefile` you created along with your payment application project. Ensure that the `Makefile` is named `Makefile` and is placed in the root directory of the project.

Note 1: `Makefiles` are typically used in Unix-like environments, such as Linux or macOS, but you can also use tools like GNU Make on Windows. Make sure to install `WSL` properly.

Note 2: Don't submit any object or executable file

Note 3: Don't submit any editor files like the ones located in `.vscode`