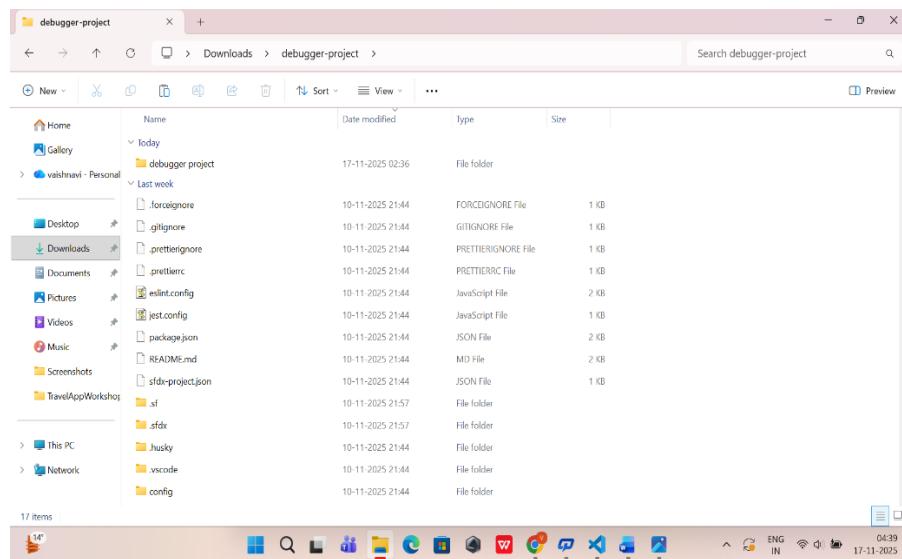


Phase 6: User Interface Development

Debug Log Analysis and Bug Fixing in Salesforce Apex

1. Designing a Developer Console-Style UI

- Create a Lightning App Page or LWC (Lightning Web Component) layout for viewing Apex logs.
- Provide sections such as:
 - *Upload Log File*
 - *Select Existing Log*
 - *Run Replay Debugger*
 - *View Debug Timeline & Events*



2. Developing

- Build components for:
 - **Log Upload Component** – allows users to upload .log files generated by Salesforce.
 - **Log List Viewer** – displays stored logs with date/time and type.
 - **Debugger Action Panel** – provides buttons such as *Replay*, *Step Over*, *Step Into*, *Step Out* (simulated for demo purposes).
 - **Debug Result Viewer** – shows output like variable values and execution steps.

The screenshot shows the Salesforce Apex Debugger interface. The code editor displays the `AccountService.cls` file with a breakpoint set at line 8. The local variables pane shows a `newAcct` object with properties `Name`, `AccountNumber`, and `TickerSymbol`. The call stack and log output windows show the execution flow and debug logs respectively.

```

public with sharing class AccountService {
    public Account createAccount( String accountName, String accountNumber, String tickerSymbol ) {
        Account newAcct = new Account(
            Name = accountName,
            AccountNumber = accountNumber,
            TickerSymbol = accountNumber
        );
        return newAcct;
    }
}

```

3. Connecting UI With Backend Apex

- LWC components call Apex methods to:
 - Store log files in a custom object.
 - Process log content and extract debug events.
 - Return step-by-step debug information back to the UI.

4. UI for Data Visualization

- Display debugging steps in structured formats like:
 - Tables (execution order)
 - Highlighted code segments
 - Error-focused sections (if any)

5. Ensuring Ease of Use

- Clear labels and simple instructions for developers.
- Intuitive navigation so users can easily:
 - Upload → Run → Analyze logs.