

HackOrbit 2025

Team Name: SheCodes

THEME: Open Innovation

PROBLEM STATEMENT:

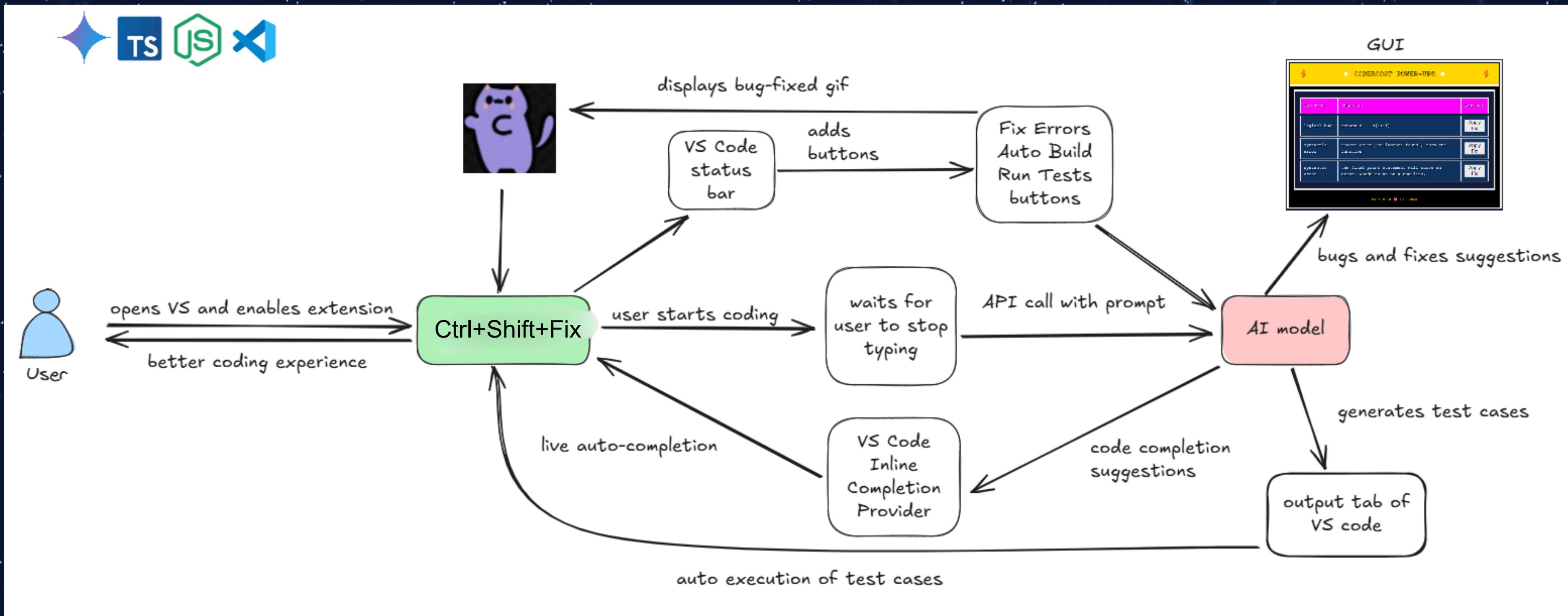
- Developers often struggle with productivity due to repetitive coding tasks, unexpected bugs, and manual build/testing cycles.
- Debugging small syntax or logic issues can consume hours, breaking the flow and reducing efficiency.
- There is a lack of intelligent, real-time tools that integrate directly within the development environment to assist with code writing, error detection, and auto-fixing - especially for beginners.
- Ctrl+Shift+Fix aims to solve this by bringing AI-powered coding assistance directly into the VS Code editor.

PROPOSED SOLUTION

Ctrl+Shift+Fix is a VS Code extension built by a first year student, through Vibe Coding, that enhances developer productivity through real-time AI-powered assistance.

- **AI Code Completion** – Smart code suggestions while typing.
- **Live Bug Detection** – Instantly highlights and explains errors
- **One-Click Fix** – Apply fixes through a simple GUI without searching Stack Overflow
- **Auto-Build Button** – Compile your code instantly after resolving bugs.
- **Seamless Integration** – Works natively inside VS Code with minimal setup.
- **Ideal for students, beginners, and hackathon developers.**

FLOWCHART / DIAGRAM



FLOWCHART / DIAGRAM - explanation

- User enables the extension in VS Code
- Buttons (Fix, Build, Run) appear in the status bar
- As the user types, live code suggestions appear
- When typing stops, an API call is made to the AI model
- AI returns:
 - Code completions
 - Bug fixes (shown in GUI)
 - Auto-generated test cases
 - User can fix bugs or build the project with one click
 - Output & results are shown in the VS Code terminal
- Bonus: Bug-fixed gif plays for fun

FEATURES:

- AI-Powered Code Suggestions - Real-time **completions** as you type
- One-Click Bug Fixes via GUI - Fix errors instantly without leaving VS Code
- Auto Build & Test Execution - Compile and test code with one click
- Live Bug Detection - Spot issues while you code
- Native VS Code Integration - Works seamlessly with your workflow

NOVELTY

- Everything happens inside VS Code - no tab switching
- Beginner-friendly interface with animated feedback
- Auto-generates & runs test cases after bug fixes
- Triggers AI only when you pause
- **Entirely built by a first-year solo dev through vibe coding.**

DRAWBACK AND SHOWSTOPPERS

- API Dependency - Requires internet & a working API key (e.g., OpenAI) for AI features
- Free Tier Limitations - May hit rate limits or credit caps in free-tier APIs
- Generic Suggestions - AI might not understand deep project context or custom logic
- Language Support - Currently optimized for JS/TS — limited for other languages
- No Offline Mode - Doesn't work without connectivity

I am actively working on making Ctrl+Shift+Fix smarter, faster, and more resilient - this is just the beginning."

TEAM NAME: SheCodes

Team member details:

Team size: Individual participant

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thank
you