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AI for Bharat Hackathon

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Team Name : The Sentinels

Team Leader Name : Abhinav Khare

Problem Statement : [Student Track] AI for Learning & Developer Productivity

Brief about the Idea:

70% of Indian CS Students:

❌ Copy-paste AI code (Copilot/ChatGPT) without understanding

❌ Fail technical interviews (40% pass rate)

❌ Become "prompt engineers," not real coders

No tool prevents this during learning.

Why Current Solutions Fail?

❌ GitHub Copilot: Zero verification

❌ LeetCode: Tests after damage done

❌ Professors: Can't detect AI usage

❌ ChatGPT: No learning enforcement

Result: 1.5M students graduate unprepared

CodeGuardian Solution

Intercepts AI code → Forces explanation → Grades with AWS Bedrock → Unlocks if understood

1. Detect AI code paste

2. "Explain in your words" (text/voice)

3. AWS Bedrock scores 0-100

4. ≥70% = unlock code

5. Track AI dependency weekly

USP of the proposed solution

Real-Time Learning Guardrail
First tool using AWS Bedrock to verify understanding before execution

Bharat-First Design
Hindi voice support

Measurable Outcomes
AI dependency 70%→30% + 40% interview pass rate improvement

No Shaming, Pure Gamification
Progressive unlocks build confidence, not guilt

Production-Ready Architecture
7 AWS services + <₹5/student/month on Free Tier

Unlike LeetCode (post-test) or Copilot (no verification)

List of features offered by the solution

It is always better to add a few visual representations (drawings/sketches/illustrations etc.) to your presentation, it adds to the power through Powered by 7 AWS Services:

Bedrock (grading) ← Lambda (orchestration) ← API Gateway ← VS Code

↓

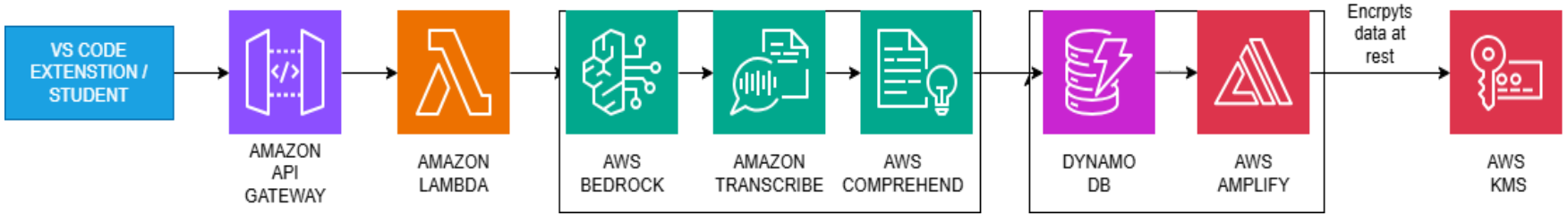
Transcribe (Hindi voice) + Comprehend (plagiarism)

↓

DynamoDB (progress) + Amplify (dashboard) + KMS (security)

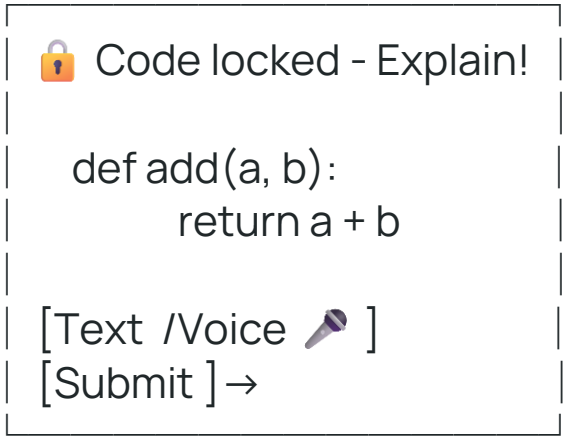
Process flow diagram or Use-case diagram

Add a flow diagram or a use case diagram or an architecture diagram.



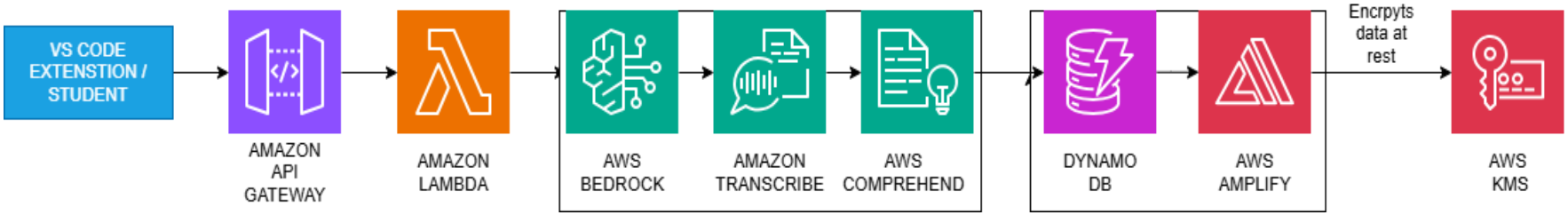
Mock Example:

VS Code Extension:



Score: 85% ✅ Code Unlocked!

Architecture diagram of the proposed solution:



Technologies to be used in the solution:

Frontend (VS Code Extension)

- TypeScript + VS Code Extension API
- React for modal UI
- Webpack build system

Backend (AWS Serverless)

- AWS Lambda (Node.js 18.x)
- Amazon API Gateway
- AWS KMS (encryption)

AI/ML Services

- Amazon Bedrock (Claude 3.5 Sonnet)
- Amazon Transcribe (Hindi/English)
- Amazon Comprehend (plagiarism)

Data & Dashboard

- Amazon DynamoDB (NoSQL)
- AWS Amplify (React dashboard)

Estimated Implementation Cost < ₹5/student/month (AWS Free Tier)

Service	Monthly Cost	Free Tier Limit
Lambda	₹0.25	1M requests
Bedrock	₹1.50	25K inferences
DynamoDB	₹0.75	25 GB storage
Transcribe	₹0.80	60 min/month
Amplify	₹0.50	5 GB hosting

Total→ ₹3.80 (Scales to 100K students)

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Thank You