PROMPTS LOG

Course Project: Student Attendance Management System

Lab: AWS Academy – Microservices & CI/CD Pipeline Builder

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Purpose of This Document

This document records all AI prompts used during the development of:

- Architecture design
- AWS implementation
- CI/CD pipeline
- Report writing
- Presentation (PPT)
- Poster / diagram explanation
- Demo video & screenshots
- Documentation

This ensures transparency, academic integrity, and completeness.

PROMPT LOG TABLE (MANDATORY)

Section 1: Project Proposal & Problem Definition

Prompt No.	Purpose	Prompt Used
1	Executive Summary Prompt	Write an executive summary: Problem with manual attendance, AWS solution using Rekognition/Lambda/API Gateway, outcomes like time/accuracy/cost savings, and deployment status.
2	Introduction Prompt	Draft a one-paragraph introduction for SAMS that explains the background of attendance tracking in universities and why moving to cloud-based automated systems is important today.
3	Problem Statement Prompt	Write a problem statement on manual attendance: cover time waste in big classes, proxy fraud, and no real-time data. Explain why current methods (biometrics, roll call) fail.
4	Aim & Objectives Prompt	List 4 specific objectives for implementing SAMS on AWS. Make each objective measurable and tied to an AWS service: - Use Amazon Rekognition to achieve >99% face recognition accuracy. - Implement serverless architecture with Lambda to handle 100+ concurrent requests. - Store attendance data securely in DynamoDB with encryption. - Deploy web interface using S3 and CloudFront for global access.

Section 2 — Architecture & Design Prompts

Prompt No.	Purpose	Prompt Used
5	AWS Architecture Design	Create an AWS architecture diagram for a Student Attendance Management System using microservices, Lambda, API Gateway, DynamoDB, Cognito, and S3.
6	Architecture Explanation	Explain each component in the AWS architecture diagram in detail for report writing.
7	Layered Design	Divide the AWS architecture into frontend, backend microservices, and data layers with explanations.

Section 2: Implementation Prompts

Prompt No.	Purpose	Prompt Used
8	IAM & Security Setup Prompt	List the step-by-step IAM configuration for SAMS: • Create IAM role for Lambda with Rekognition and DynamoDB permissions • Set up S3 bucket policy for static website hosting • Configure security groups allowing HTTPS only.
9	Service Implementation Prompt	Provide the exact AWS Console steps to create: • DynamoDB table 'AttendanceRecords' with StudentID (partition) and Timestamp (sort key) • Lambda function 'face-recognition-handler' with Python 3.9 • API Gateway REST API with POST /attendance endpoint • S3 bucket for frontend hosting with public read access.

10	Testing & Monitoring Prompt	Describe testing workflow for SAMS:
		● How to test face recognition with sample student images
		● API testing using Postman/curl
		● CloudWatch setup for Lambda logs and API Gateway metrics
		● Final output verification in DynamoDB.
11	Implementation Summary Prompt	Write implementation steps: AWS account setup, IAM, VPC, Lambda, API, final deploy. Make it step-by-step for screenshots.

Section 3: Technical Report

Prompt No.	Purpose	Prompt Used
12	Report Structure Prompt	Create a Table of Contents for a 15-page SAMS report with sections: Abstract, Introduction, Literature Review, Architecture, Implementation, Testing, Security, Conclusion, References. Include page numbers.
13	Lists Generation Prompt	Create List of Figures (Architecture Diagram, IAM Screenshot, Lambda Code, CloudWatch, Results Graph) and List of Tables (Services Comparison, Cost Analysis, Accuracy Results).
14	Technical Writing Prompt	Write the Security Analysis section covering: 1) IAM least privilege, 2) Encryption (at rest/in transit), 3) VPC security groups. Use AWS terms and 2-3 citations."
15	References Prompt	Provide 8-10 APA references for the report: include AWS docs, academic papers on face recognition, cloud security articles, and case studies. Add URLs/DOIs.

Section 4: PowerPoint Presentation

Prompt No.	Purpose	Prompt Used

16	Complete Content Structure	Create a 10-slide PPT for SAMS covering: Title, Problem, Solution, AWS Diagram, Implementation, Demo, Results, Security, Cost, Conclusion."
17	Visual Design & Results Focus	Design a 'Results' slide with AWS visuals showing: 85% speed, 99.2% accuracy, $10 cost. Use icons, minimal text.

Section 5 — Demo Video & Screenshots Prompts

Prompt No.	Purpose	Prompt Used
18	End-to-End Demo Script	Write a 2-minute demo script: 1) Login to AWS Console, 2) Show face recognition attendance capture, 3) Check DynamoDB record, 4) View CloudWatch metrics.
19	Clarity & Narration Guide	Write narration points for: logging into AWS, explaining face recognition, showing data storage in DynamoDB, and verifying system operation. Keep it concise.

Section 6: Marketing Poster

Prompt No.	Purpose	Prompt Used
20	Design & Creativity	Reorganize slide to make the Architecture Diagram larger. Replace the table with an infographic and use a tech color palette.
21	Content Accuracy	Check if MongoDB vs. DynamoDB is consistent in the report. Verify if AWS can achieve 99.5% accuracy and identify any security gaps against proxy attendance.