

DESIGN AND DEVELOPMENT OF MATH NOTES APPLICATION POWERED BY GEMINI API

Tugas Akhir

**Diajukan untuk Memenuhi Salah Satu Persyaratan Mencapai Derajat Sarjana
Komputer**



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Abstract

Mathematics, while essential for scientific and technological advancement, is often challenging for learners due to its complex concepts and logical reasoning requirements. Existing math note applications on Android often struggle with accurately detecting numbers and providing correct answers, which can frustrate users and hinder the learning process. This thesis addresses these challenges by developing an AI-powered math notes application that combines traditional note-taking with intelligent learning support. Using Android Studio for mobile development and Gemini models for natural language processing, the app provides features such as accurate number recognition, problem-solving, equation interpretation, and precise answer. The methodology involves integrating symbolic computation tools with AI-driven functionalities to enhance user interaction and learning outcomes. Preliminary testing shows that the app effectively shows how users can understand mathematical concepts with this method, while significantly reducing errors in number detection and computation, demonstrating the potential of AI in creating accessible and interactive educational tools.