

Project Initialization and Planning Phase

Date	19 July 2024
Team ID	SWTID1720013872
Project Title	CodeXchange
Maximum Marks	3 Marks

Project Proposal (Proposed Solution)

CodeXchange addresses these issues by providing a robust and intuitive web application that leverages advanced translation algorithms and syntax analysis to facilitate accurate and reliable code translation. This ensures seamless collaboration, efficient platform transition, and enhanced code reusability, ultimately streamlining the development process and accelerating project delivery.

Project Overview	
Objective	The primary objective of CodeXchange is to develop a web application that accurately translates code between different programming languages using the Google PALM API. This tool aims to enhance code reusability, streamline platform transitions, and improve team collaboration.
Scope	CodeXchange will translate code between popular programming languages using advanced algorithms and syntax analysis, with a user-friendly web interface for code submission and translation.
Problem Statement	
Description	The manual process of translating code between different programming languages is time-consuming and error-prone. This hinders efficient development, platform transitions, and collaboration within development teams.
Impact	Solving this problem will streamline code translation, reduce errors, and save time. It will enhance code reusability, facilitate smoother transitions between platforms, and improve overall team productivity and project delivery.

Proposed Solution	
Approach	Use the Google PALM API to automate and improve code translation. Provide a user-friendly web interface for easy code submission and retrieval.
Key Features	<ul style="list-style-type: none"> • Accurate translation algorithms • Syntax preservation • Intuitive web interface • Multi-language support

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU specifications, number of cores	Intel/Ryzen Processor, 1-3 cores
Memory	RAM specifications	8 GB
Storage	models	10 MB
Software		
Frameworks	Python frameworks	Streamlit
Libraries	Additional libraries	google.generativeai
Development Environment	IDE, version control	VS Code, Python 3.12.4