



C Project Portfolio Generator

Automating Professional Documentation for C Programming Projects

ACADEMIC PROJECT

C PROGRAMMING

Student Information

Name: Mohit Kumar

Course: Computer Science Engineering

Institution: Rungta International Skill University

Email: mk9658173@gmail.com

Mobile: +91 7667615747



Problem Statement

Challenge

Beginner programmers struggle with creating professional project documentation

Issue

Manual README.md creation is time-consuming and often poorly structured

Need

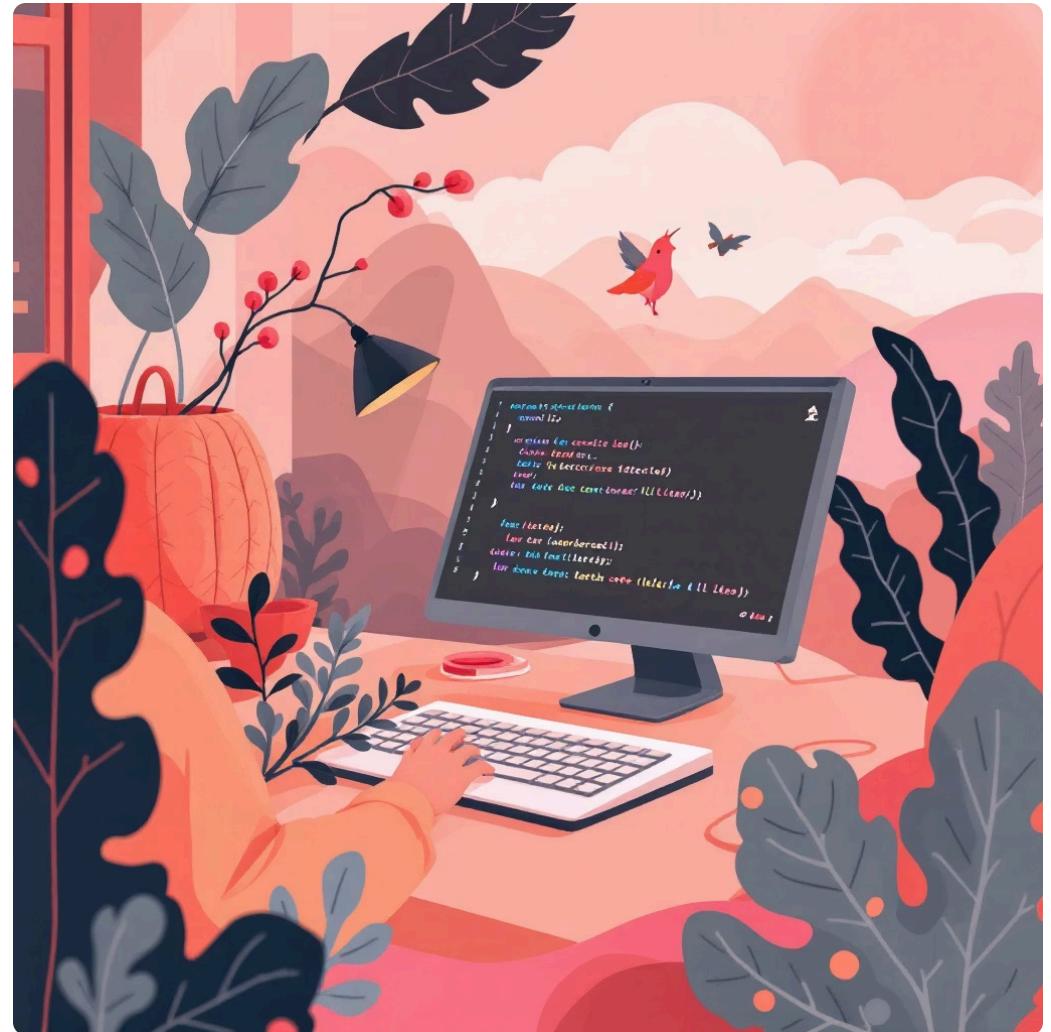
An automated solution that generates proper README files using simple inputs



Project Overview

The C Project Portfolio Generator is a command-line application built entirely in C programming language. It automates the creation of README.md files by collecting user inputs such as project title, features, and usage instructions.

The generated output follows standard Markdown formatting conventions and is immediately ready for upload to GitHub repositories, making it ideal for student projects and portfolios.



Core C Code Implementation

```
#include <stdio.h>

int main() {
    FILE *file;
    char title[100], features[300], usage[300];

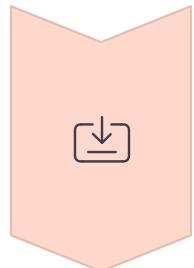
    printf("Enter Project Title: ");
    fgets(title, sizeof(title), stdin);
    printf("Enter Project Features: ");
    fgets(features, sizeof(features), stdin);
    printf("Enter Project Usage: ");
    fgets(usage, sizeof(usage), stdin);

    file = fopen("README.md", "w");
    if (file == NULL) {
        printf("Error creating file!\n");
        return 1;
    }

    fprintf(file, "# %s\n", title);
    fprintf(file, "## Features\n%s\n", features);
    fprintf(file, "## Usage\n%s\n", usage);

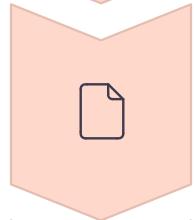
    fclose(file);
    printf("README.md generated successfully!\n");
    return 0;
}
```

How the Code Works



User Input Collection

The programme uses `fgets()` function to safely capture project details from the user including title, features, and usage instructions



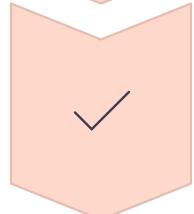
File Creation & Handling

C's file handling capabilities create `README.md` using `fopen()` in write mode with proper error checking



Markdown Formatting

The `fprintf()` function writes content with proper Markdown syntax including headers and sections



File Closure & Confirmation

Resources are properly released using `fclose()` and success message confirms file generation

The Role of C Programming

C programming serves as the complete backend logic for this project, demonstrating fundamental programming concepts in action.

Input Processing

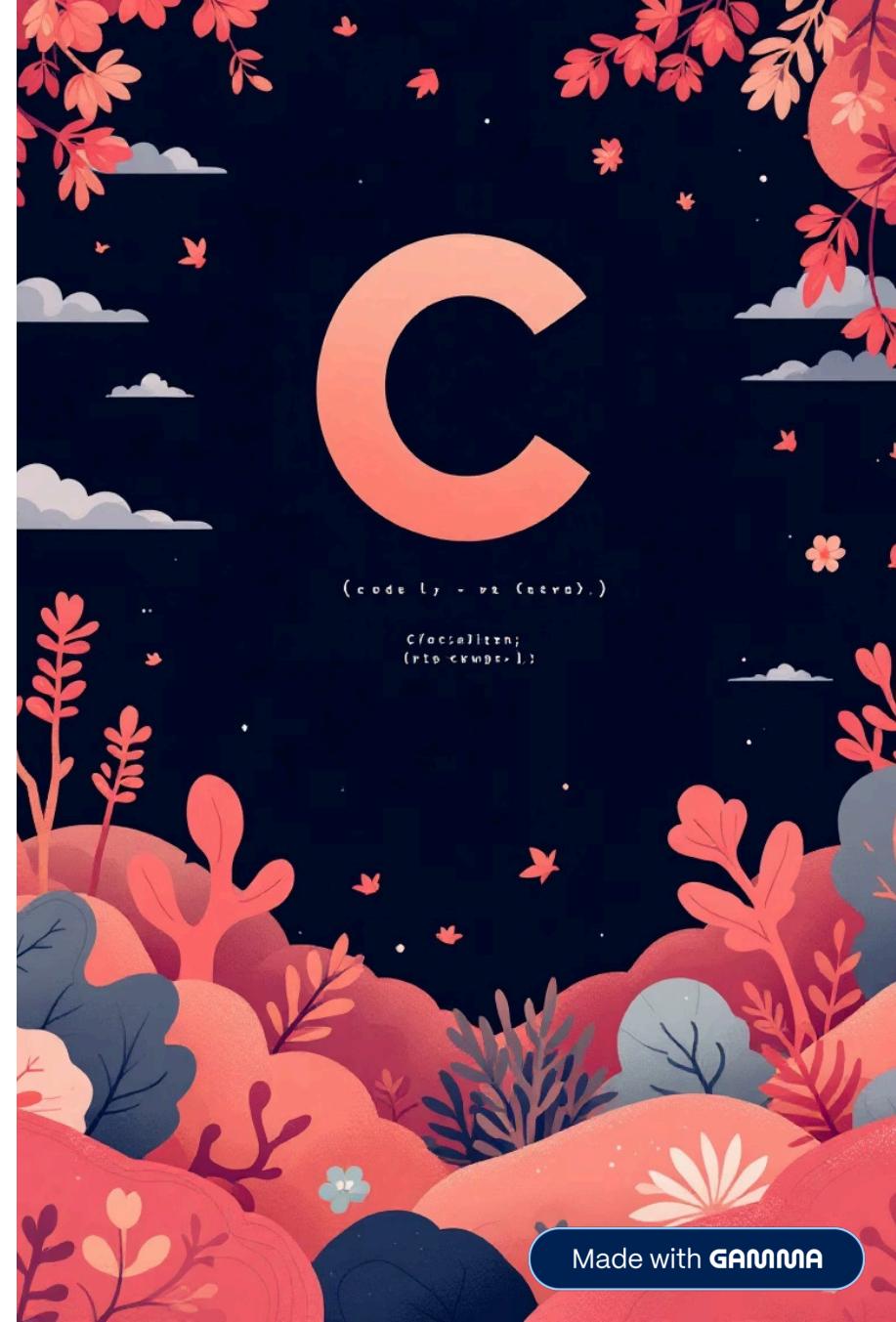
Handles user input efficiently using standard input/output functions

File Operations

Demonstrates file handling operations including creation, writing, and proper resource management

Data Formatting

Applies Markdown formatting rules to structure professional documentation automatically



Key Features & Technologies

Project Features

- Automatic README.md generation
- User input-based customisation
- Simple command-line interface
- Markdown formatted output
- GitHub-ready documentation

Tools & Technologies



C Language



VS Code



GitHub



Markdown



Real-World Applications



Beginner Programmers

Perfect tool for students learning C programming and project documentation



Professional Portfolios

Helps build impressive GitHub profiles with well-documented projects



Time Efficiency

Significantly reduces time spent on manual documentation tasks



Learning Tool

Reinforces understanding of file handling and I/O operations in C

Conclusion

The C Project Portfolio Generator successfully addresses the challenge of creating professional project documentation by automating the README.md generation process.

This project demonstrates practical applications of core C programming concepts including file handling, string manipulation, and input/output operations whilst providing genuine value to the programming community.

It serves as an excellent example of how fundamental programming skills can be applied to solve real-world problems faced by developers.

