

# CodeBreaker Game

**Group Name:** Binary Breakers

## Group Members

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## Abstract

We propose to develop '**CodeBreaker**', a fun yet intellectually challenging console-based game where players attempt to guess a secret code within limited attempts. The game combines **logic**, **probability**, and a **scoring mechanism** to make learning programming both enjoyable and rewarding.

## Problem Statement

Many beginner-level games lack critical thinking elements. Our project aims to bridge this gap by designing a simple, console-based number-guessing game that requires **strategic thinking**, thereby improving **problem-solving skills** while entertaining users.

## Objectives

- Develop a fully functional console-based code guessing game.
- Incorporate scoring based on the number of attempts.
- Provide feedback after each guess to guide players logically.
- Offer variable difficulty levels by updating number of digits.
- Enhance teamwork by dividing modules among members.

## Scope / Features

- Random code generation.
- User input validation.
- Limited attempts and scoring system.
- Feedback after each guess.
- Variable difficulty levels.
- Scope excludes advanced GUI or networking features.

## High-level Design / Modules

- User Interface (Frontend) Displays menu, takes input, and shows results.
- Scoreboard Module — Records and displays scores for replayability.

### CodeBreaker Game Development Process



Made with Napkin

## Technologies / Tools

C Language, GitHub for version control, GCC compiler.

## Timeline / Milestones

- Week 7: Proposal, repository setup, and base code structure.
- Week 8: Game logic (random generation, attempts, scoring).
- Week 9: Input validation, feedback system, scoreboard module.
- Week 10: Integration, debugging, and testing.
- Week 11-12: Documentation and final review.

**Deliverables**

Proposal PDF & DOCX, Source code on GitHub, Final demo.

**Repository Link:**

<https://github.com/muhammasharhussain/PF-Code-Breaker-Game.git>