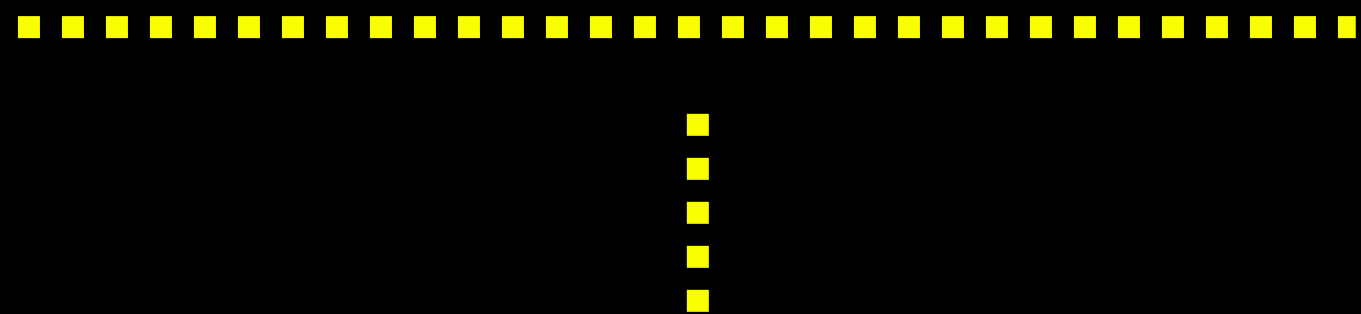


CSE 100 - SDP

CONNECT 4

START!



Team Members



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Objectives

- **Concept:** To design and implement the classic game "Connect 4".
- **Platform:** A console-based application built using C++.
- **Goal:** To deliver a fully functional, two-player game demonstrating strong software development fundamentals.
- **Experience:** An intuitive and clean text-based user interface.

Project Overview

Our primary objectives for this project are:

- **Implement Core Game Logic**
- **Create Win-Condition Algorithm**
- **Build a Console UI**
- **Ensure Robust Input Handling**
- **Adhere to Best Practices**
- **Deliver a Complete Product**

Scope of the Project

In Scope:

- **Game Board:** Standard 6x7 grid.
- **Player Login**
- **Gameplay:** Two-player (Human vs. Human) mode.
- **Rules:** Implementation of all standard Connect 4 rules.
- **Win/Draw Detection:** Automatic detection and announcement of game outcomes.
- **Leaderboard:** A text file will track and display player win counts.

Out of Scope:

- **Graphical User Interface (GUI):** A purely console-based application.
- **AI Opponent:** No computer-controlled player.
- **Network Multiplayer:** Gameplay is limited to a single machine.
- **Game State:** No feature for saving or loading games.

Methodology & Technology

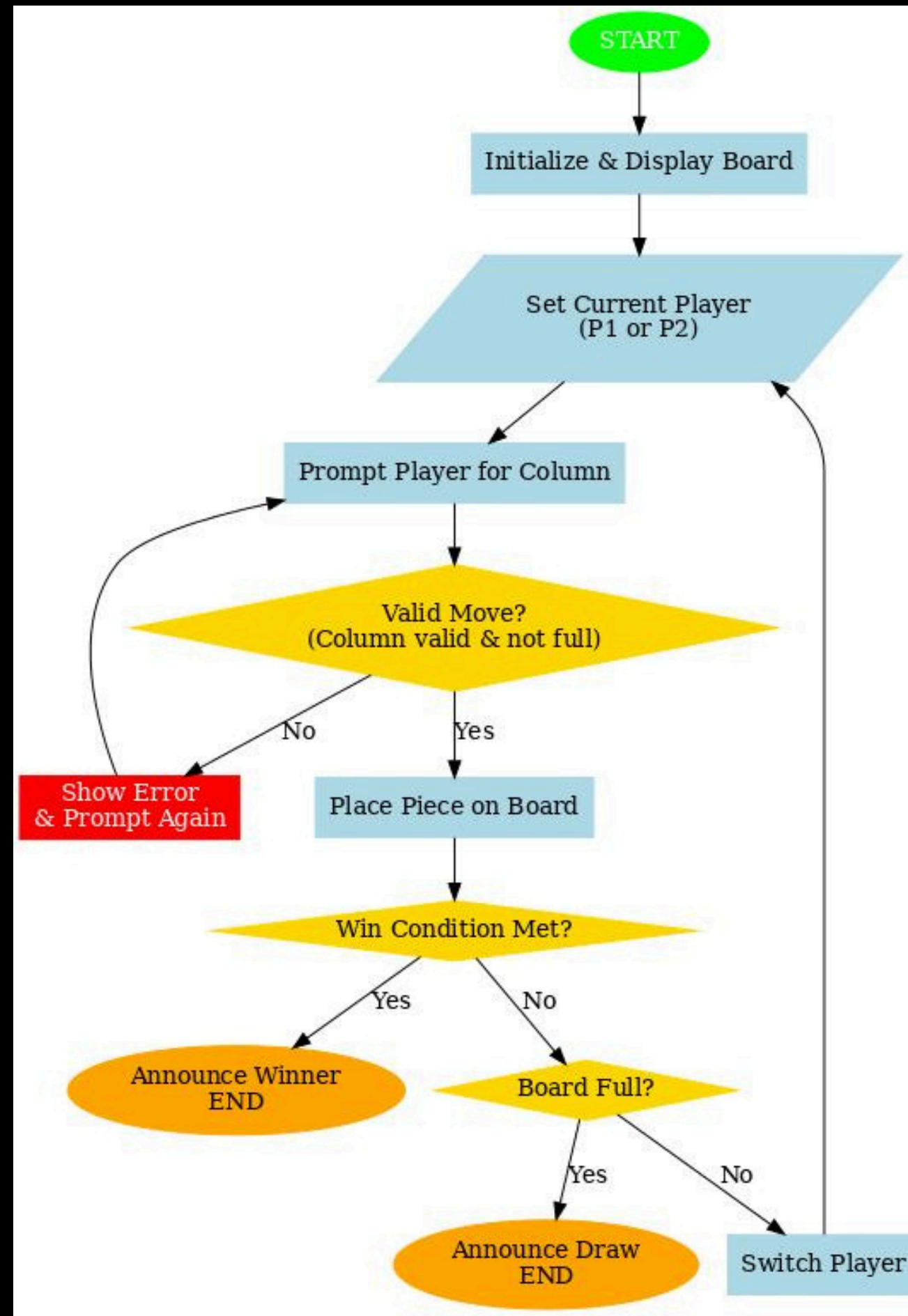
Language & Tools

- Programming Language: C++ (standard libraries).
- Compiler: G++ or similar.
- IDE: VS Code, CLion, or any preferred C++ editor.
- Version Control: Git and GitHub.

Data Structure

- The game board will be a `char board[6][7]` 2D array, offering a simple and efficient way to manage the game state.

Game Logic Flow



Proposed Timeline & Milestones

WEEK 1

Planning & Setup
Design basic structure
Set up development environment and Git repository.

WEEK 2

Core Implementation
Implement board initialization and display.
Develop player input handling and validation.

WEEK 3

Implement Mechanics
Add player login and
leaderboard file I/O.

WEEK 4

Win/Draw Detection & Testing
Begin comprehensive testing
and debugging.

WEEK 5

Finalization, Refine code, add
comments, Prepare final
submission.

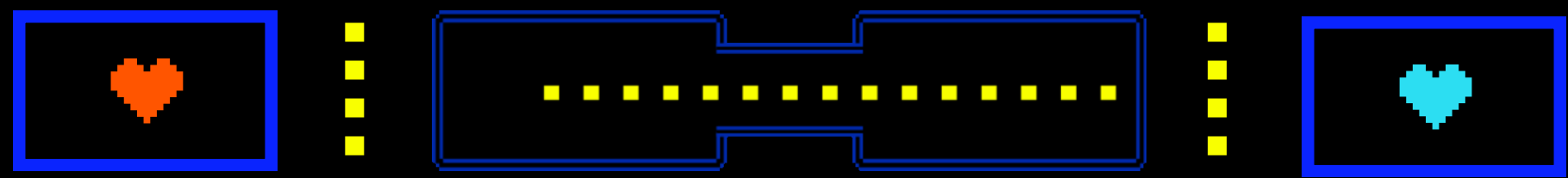
Conclusion

We are confident we can deliver a high-quality, console-based Connect 4 game that meets all project objectives.

Expected Outcomes:

- A complete and playable two-player Connect 4 game with player names and a persistent leaderboard.
- A well-structured C++ application with clear documentation.
- A demonstration of our software development skills, from design to testing, including file I/O.

This project is an excellent opportunity to apply our programming skills to a tangible product.



THANK
YOU

END