# TOBB ETU BIL 482 – Project Definition Document

## Team Members

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## Project Name

**Color Clash**

## Project Summary

Color Clash is a web-based, two-dimensional fighting game designed to provide a fun, colorful, and child-friendly gameplay experience. Instead of focusing on intense violence or complex mechanics, the project emphasizes accessibility, creativity, and strategic variation through simple but extensible game mechanics.

The game allows players to compete locally using the same keyboard in different gameplay modes. Each character can switch between different color- or element-based fighting modes, where each mode affects gameplay attributes such as attack power or defense. Beyond being an entertaining game, Color Clash primarily serves as a practical case study for applying software design patterns within a game-oriented context.

## Objectives

The main objectives of the Color Clash project are:

- To develop a functional, web-based 2D fighting game
- To support multiple local gameplay modes
- To implement character fighting modes that influence gameplay behavior
- To demonstrate the effective use of software design patterns within a game architecture
- To design an ethical, non-violent, and child-appropriate game environment
- To build a modular and extendable structure that can evolve during development

## Scope

### Included in Scope

- A browser-based 2D fighting game
- Local multiplayer mode (two players using the same keyboard)
- Tournament mode for local multiplayer:
    - Allows multiple players to participate in a friendly local tournament
    - Players enter their names before the tournament begins
    - Matches are scheduled automatically, and games are played sequentially
    - Supports progression through rounds until a final match is played
- Basic combat mechanics such as movement, attack, and defense

- At least two distinct fighting modes (e.g., Fire, Water) that modify character attributes
- Simple and intuitive user interface

**Not Included in Scope**

- Player vs. AI or bot-controlled gameplay
- Online multiplayer or network-based gameplay
- Graphic violence, blood, or mature content
- Advanced physics engines or realistic combat simulations
- Complex level designs or large numbers of maps
- Commercial release, monetization, or persistent user accounts

## Target Audience

- Children and young players seeking a fun and non-violent fighting game
- Casual players who prefer simple and accessible gameplay
- Students and instructors interested in understanding how design patterns can be applied in game development

## Key Features

1. Web-based 2D fighting game playable directly in a browser
2. Local multiplayer mode for two players using one keyboard
3. Local tournament mode for groups of friends
4. Color/element-based fighting modes that affect attack and defense
5. Child-friendly, ethical, and visually engaging game design

## Deliverables

- Project Definition Document
- Project Plan Document
- Software Requirements Specification Document
- Software Architecture Overview (diagram and explanation)
- Pattern–Use Case Mapping Matrix
- A playable web-based game prototype

## Project Success Criteria

- The game must run smoothly in a modern web browser
- All defined local game modes (local multiplayer and tournament mode) must be fully implemented
- At least two distinct fighter modes must be implemented and clearly affect gameplay behavior
- Players must be able to complete a full local tournament flow from participant entry to final match
- The game must maintain a low level of violence and remain suitable for children
- Design patterns used in the project must be clearly identifiable and well-documented within the architecture