**Introduction**

This project It is designed in a 2D environment with nxn columns and rows. The game mechanically has 4 different movements: up, down, left and right. It is a Candy Crush-themed game consisting of 5 different basic candies, except for special candies. A non-monotonous game experience is provided to the players by adding candies that are different from the basic candies, which are described as special candies. The game is turn-based and has a mechanic that explodes and scores points by aligning three or more candies of the same color vertically or horizontally. In order for the player to pass the level, the score determined depending on the level must be filled before the specified number of moves is completed. The designed levels are designed to challenge the player and make them think more as they level up. The levels vary in difficulty according to the changes in the score and number of moves, and these numbers are left to the team members. It is planned to have a variety of music and not to stay with a fixed music, giving the player an enjoyable and moving experience.

**Methodology**

**Interface:**

When the game code is run, a screen with a total of three buttons opens first. These buttons are, respectively, Play”, ‘Settings’ and ‘Exit’. When the Play button is pressed, a new screen is opened and an interface with levels is passed. In this section, there are star-shaped icons that allow the player to enter the desired section. When the Settings button is pressed, a new screen appears where the sound settings of the music added to the game can be changed; here the player can adjust the volume they want to listen to or turn it off completely. When the Exit button is pressed, a balloon will appear asking the player if they wish to exit the game.

**In Game:**

The game starts by selecting the desired section from the menu screen and is won by reaching the score on the grid where the candies are placed. In the game, points are earned by exploding candies by combining three or more candies on a line. However, another important point that players should pay attention to is that there is a certain number of moves for each level. If the player cannot complete the section before the number of moves is over, the game is lost.

**Code Structure:**

The difficulty system algorithm of the game varies according to the level. Each level has a specific number of moves and points to be achieved, which are manually determined by the developer. The points to be achieved are determined by keeping the number of moves at the level that can be achieved. The difficulty of the level has been increased by reducing the player's opportunity to make mistakes, that is, by reducing the number of moves. While function declarations were added to the me.h file, function definitions were added to the me.cpp file and integrated with the design codes. Game music, candy images and background images were placed in the folder file and used as ready-made.

**Recommendations**

The number of levels is sufficient to start with but not suitable for a long-term experience. However, by adding different candy types and effects, players can have a more enjoyable and fluid experience. New levels can be added with closed squares, areas that open depending on the number of moves or points earned in the level. In addition to in-game changes, the interface buttons can be adjusted to fit the Candy Crush themes. Depending on the level the player enters, music can be adjusted and special experiences can be provided for the levels. Special tools used in-game, either earned as you play or as a daily login reward, can be provided to help the player pass levels more easily. The shapes of the candies can be changed according to the player's chosen culture or special theme. Play-only modes can be added to the game at certain times, such as special days, holidays and public holidays.

**Conclusion and Evaluation**

The Candy Crush-style 2D game designed within the scope of this project was successfully realized in terms of basic mechanics, level design and level difficulty. In addition to these, special candies and visual and auditory elements were added to increase the player's enjoyment of the game. With these structures added to the game, a monotonous game experience for the player was avoided. In addition, while in the original game, it was not allowed to change candies when there was no match, in this game developed by us, users were allowed to change candies as desired by offering a free experience.

In terms of evaluation, there are no deficiencies in terms of game mechanics; it provides all the mechanical features of the sampled game. Technically and visually, the game provides the features of the game that should be designed. It provides smooth interaction of the player before and during the game. If new chapters and visual themes are added to the game regularly, it can appeal to the general audience, and if different modes mentioned in the suggestions section are added, more satisfactory results can be obtained in terms of player experience.

As a result, the project has achieved success considering its initial goals and has a promising potential for the future. With the right innovations and improvements, a successful game prototype has been put forward.