# Dylan Gaines

## Feature List:

Tetrimino Suspension

Controls Graphic

Launch Menu

## 

## Feature Details

### Tetrimino Suspension

#### Explanation

While a Tetrimino is active/descending, it can be held for later use. This temporarily removes the Tetrimino from play until it is swapped for another Tetrimino. If there is no Tetrimino currently held, the Tetrimino is simply stored. If there is already a Tetrimino being held, the currently held Tetrimino and the currently falling Tetrimino are swapped.

#### Epic

As a Tetris Player I want to be able to save my Tetrimino for later so I can use it later, or skip to the next piece.

##### Stories:

As a Tetris player I want to be able to hold a Tetrimino so I can avoid using it right away

* Create a logical holder for the Tetrimino.
* Create a control that the player pushes that holds the current Tetrimino.
* Create a function that moves the Tetrimino off the active grid and into the Holder.

As a Tetris player I want to be able to retrieve a held Tetrimino so I can use it instead of the current piece.

* Create an accessor for the holder.
* Map this functionality to the same key as the storage feature.
* Create a displayed Holder so the User knows what is currently held.

### Controls Graphic

#### Explanation

Graphic to the side of the playing board that shows what controls perform what action. This box can be hidden and reopened. This may change if controller mapping is implemented.

#### Epic

As a Player I want a Controls graphic so I can intuitively learn the game, then play it on my own.

##### Stories:

As a New Player I want control graphic so that I can learn to play the game

* Create Controls graphic that appears when a game first starts
* Create Controls graphic to the side of the board.

As an Experienced Player I want to hide the controls graphic so the display is not cramped   
+ As a New Player I want to be able to reopen the control graphic so that when I accidentally close it, I don’t have to restart the entire application to see it again.

* Make the control graphic hidden/shown via toggled property.
* Create a function that hides/shows the graphic by toggling the property.
* Map the toggle function to a key.
* Create an always present graphic that shows the toggle controls key.

### Launch Menu

#### Explanation

Menu that appears before the Tetris game is launched, allowing the user to set certain settings to change their experience while playing the game.

#### Epic:

As a player, I want to be able to set specific settings for the game before running it in order to personalize my experience.

##### Stories:

As a Player I want to set specific settings for the game before running so I can adjust the game’s difficulty to my skill level.

* Make the menu appear before the Tetris Window.
* Implement a Context/Strategy pattern to implement the settings themselves being changed.
* Provide a settings section and start button. The start button sets the strategies based on input, then initiates the main game loop.

As a Developer, I want a settings section so I can implement multiple features that affect the same functionality

* Partition the Settings window into labeled sections.
* Ensure all implementations receive a setting if needed.

# Teddy Amare

## Feature List:

Background Flash

Game Level

Save Highscore

## 

## Feature Details

### Flashing Background

#### Explanation

The game will start off with a simple primary background color. Once the user starts playing the game, the background will flash matching colors with the current Tetris that’s dropping to distract the user and make the game more challenging.

#### Epic:

As a Tetris Player, I want the background of the board to be interesting as it goes because it will become more challenging and fun to play.

##### Stories:

As a Tetris player, I want the background color of the board to flash with a color matching each subsequent Tetris block on the board coming down for a few seconds because it’ll create a more interesting play in the game.

* Grab the the colors of the tetriminos displaying on the board and randomly assign them to be the background color of the board.

As a Tetris player, I want the timing of the flashing to be accurate with the time the blocks are dropping because it can create a more challenging navigation when placing the blocks.

* Sync the time of the background color switch with the block drop

### Game Level

#### Explanation

Tetris will have a level to choose from when starting to play. Implementation will be dependent on the team’s chosen strategy. One can only start from Level 1 and continues to play to unlock more levels.

#### Epic:

As a Tetris Player, I want to be challenged when playing the game because it’s more fun that way.

##### Stories:

As an initial Tetris Player, I want to start off with a Level 1 Tetriminos because I haven’t played the game before.

* Game shows what Level the current user is on the top as the user plays on

As a Tetris Player who has played the game on Level 1 before, I want the user to go to the next Level because it ‘ll get more challenging

* The user will have to hit a specific score to unlock the next Level

### Save Highscore

#### Explanation

Save High score is a way to persist the High score of the Tetris player. Future implementations may include saving the name of the player and associating the Highscore to the current player.

#### Epic:

As a Tetris Player, I want to save a high score on my application because I can compete more with the goal to beat that highscore.

##### Stories:

As a Tetris Player, I want the game to display the general score along with the high score so I can see how much I will have to go to beat the high score/

* High score can be displayed on the top right corner of the screen (Highscore: 43)

As a current Tetris Player, I want to see the name of the player who has the highest score on the game so that I can identify the person and try to match the score

* Display a table in a settings menu displayed above by Dylan with name and saved score and a high score tab.

# Quentin Roa

## Feature List:

More Tetriminos

Color Palette

More Controls

## 

## Feature Details

### More Polyominoes

#### Explanation

Adding more Polyominoes that can drop, to add some more complexity to the game.

#### Epic:

As a player, I want more variance because too much of the same thing is boring.

##### Stories:

As a player, I want different Polyominoes because it adds something different.

* Create an extended list of Polyominoes that will fit within the same grid.
* Edit picker to pick from the whole list.

As a player, I want more Polyomino colors because it makes the game look more interesting.

* Add more colors to the color list.
* Allow the color picker to pick from the extended colors.

### Color Palette

#### Explanation

This will add a new color palette to the game, to make it seem less dated.

#### Epic:

As a player, I want something more interesting because it will hold my attention better.

##### Stories:

As a player I want a darker color palette because I am more accustomed to it.

* Changing the background to a dark gray.
* Making the grid black.
* Making the counter white.

As a player I want more vibrant Polyominoes because the dark background will make them pop.

* Removing the old Polyomino colors.
* Adding similar, but brighter new colors.

### More Controls

#### Explanation

Adding controls for rotating through two different ways.

#### Epic:

As a player, I want more control over the game because it will make it easier to orient the Polyominos.

##### Stories:

As a player I want to be able to rotate clockwise because all rotations should be the same way

* Making sure all shapes are rotated the proper direction.
* Mapping the D key to clockwise rotations.

As a player, I want to be able to rotate counterclockwise because I can already rotate clockwise.

* Making a function to select the previous orientation.
* Mapping the A key to counterclockwise rotations.

# Drew Woll

## Feature List:

Fall Speed Control

Grid Size Control

Sounds for actions

## 

## Feature Details

### Change Game Speed

#### Explanation

Players will have the option before starting a game to change the speed at which blocks fall, in turn, resulting in a harder difficulty.

#### Epic:

As a player, I want to choose the difficulty level of my Tetris game because I would like to see how good I am at the game.

##### Stories:

As a player I want to have fun but also be challenged because it feels more rewarding

* Players will determine how fast their game speed will be before beginning it
* Over time, players may want to slowly increase this speed to see how high they can go

As a player I want to play the game as long as possible because I enjoy the challenge and would like to continuously challenge myself.

* Having one speed to play will get boring so players will be given the option to test how good they are at the game by increasing the speed.

### Change Size of Tetris Grid

#### Explanation

Players will have the option to change the size of the grid their game will start with.

#### Epic:

As a player I want to change the experience of my Tetris game because I would like more of a challenge and an experience that is customizable.

##### Stories:

As a player I find Tetris to be hard because of the speed at which the bottom of the grid fills up.

* Players can choose a larger grid when first learning how to play Tetris so they have an easier time playing the game.

As a player I want to have fun but also be challenged because it feels more rewarding

* Players can choose a smaller grid when they’ve learned the game so it becomes more challenging and fit for their skill level.

### Implement Sounds for shapes moving and being placed

#### Explanation

As shapes move down the grid, each movement will make a sound as well as when they are placed at the bottom of the grid.

#### Epic:

As a player I want sounds in the video games I play because they make the games feel more interactive and give me audio queues as the game plays.

##### Stories:

As a player I want to hear when a block is placed because it confirms that I can move my attention to the next shape.

* Each instance of a shape being placed at the bottom of the grid will trigger a specific sound

As a player I want the games I play to have audio so I can feel more immersed and aware of the game.

* Each instance of a shape moving will trigger a sound