

Screen Sketches

Group 18

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CyFIGHTER

Actors/Functionality

Player:

- Play game: Play the game from top to bottom.
- Unlock features: Unlock levels, weapons, aircrafts, and bombs using the in game tokens.
- Save game: Save the number of tokens collected as well as features unlocked.
- Play co-op: Play any level with a second player. Both players would work cooperatively to beat the level.
- Adjust difficulty: Change between difficulty levels. The difficulty would affect how easily the aircraft takes damage.
- Post/View scores: Post score after game over to an internet server. Players can view each other's single scores and Co-op scores on any difficulty.
- Change settings: Adjust sound effects and music volume
- Select levels: Choose any level that is unlocked and start the game from there.

Debugger:

- Perform player functionality: The debugger can perform all functionalities listed under the Player actor.
- Access all features: Weapons, bombs, and aircrafts without the need to unlock them.
- Select any level: Select any level from the level select screen including ones locked to the player.
- Access log messages: Access all log messages created by the program.

Administrator:

- Perform player and debugger functionality: The administrator can perform all functionalities listed under the Player and Debugger actors.
- Change prices: Adjust the token prices of weapons, aircrafts, and bombs.
- Disable/Enable features: Disable/enable levels, weapons, aircrafts, and bombs so the player can no longer use them.

Non Functional Requirements

Performance - The program must run with little to no lagging during single player mode. The program must run with little to no lagging during multiplayer when internet connection is strong. Multiplayer mode may experience lag depending on internet connection.

Throughput - The program must efficiently utilize resources to maintain smaller throughput. This includes proper loading and disposing of assets during runtime. The program must maintain garbage collection by releasing unused objects back to memory (i.e., setting them to “NULL”).

Scalability - The program’s server must handle a large multitude of users at one time. The server must allow posting and reading of high scores as well as supporting multiplayer during high traffic periods.

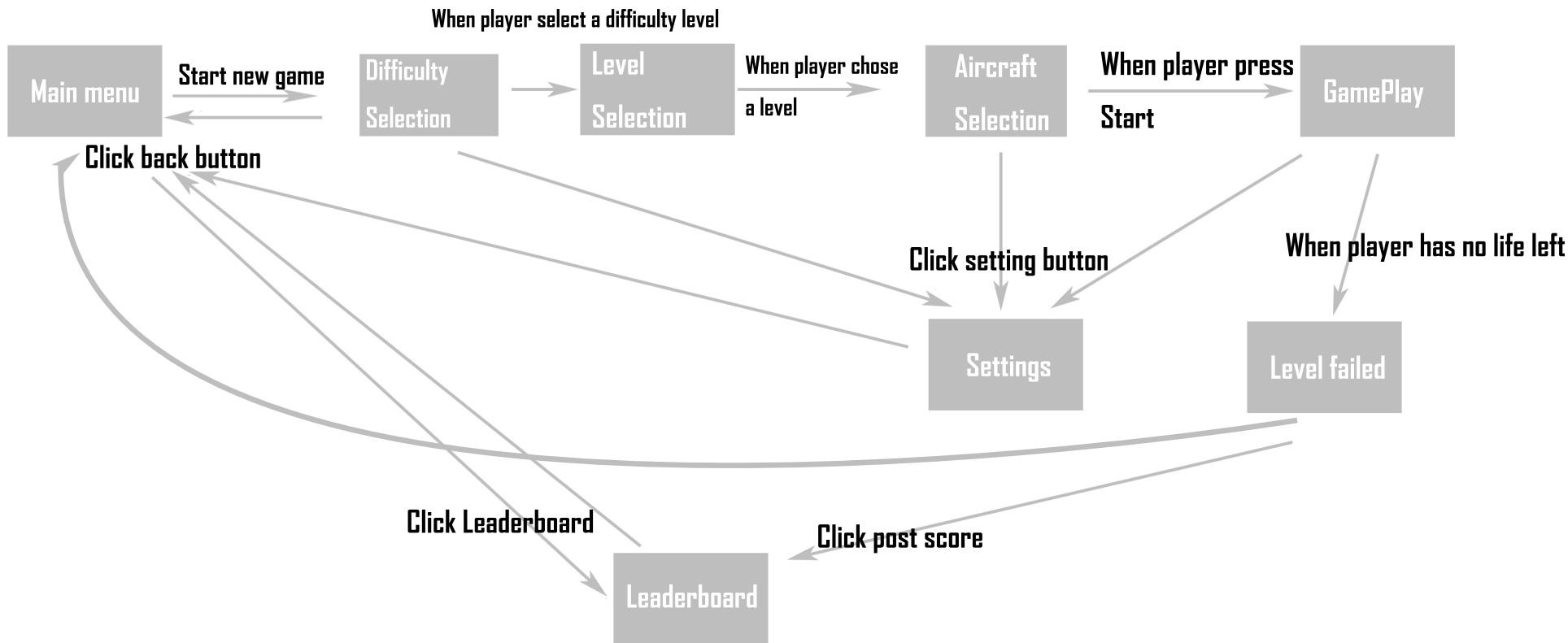
Reliability - The program must not crash without explanation. If an error does occur, it should be handled by the code and an error message should be displayed to the user.

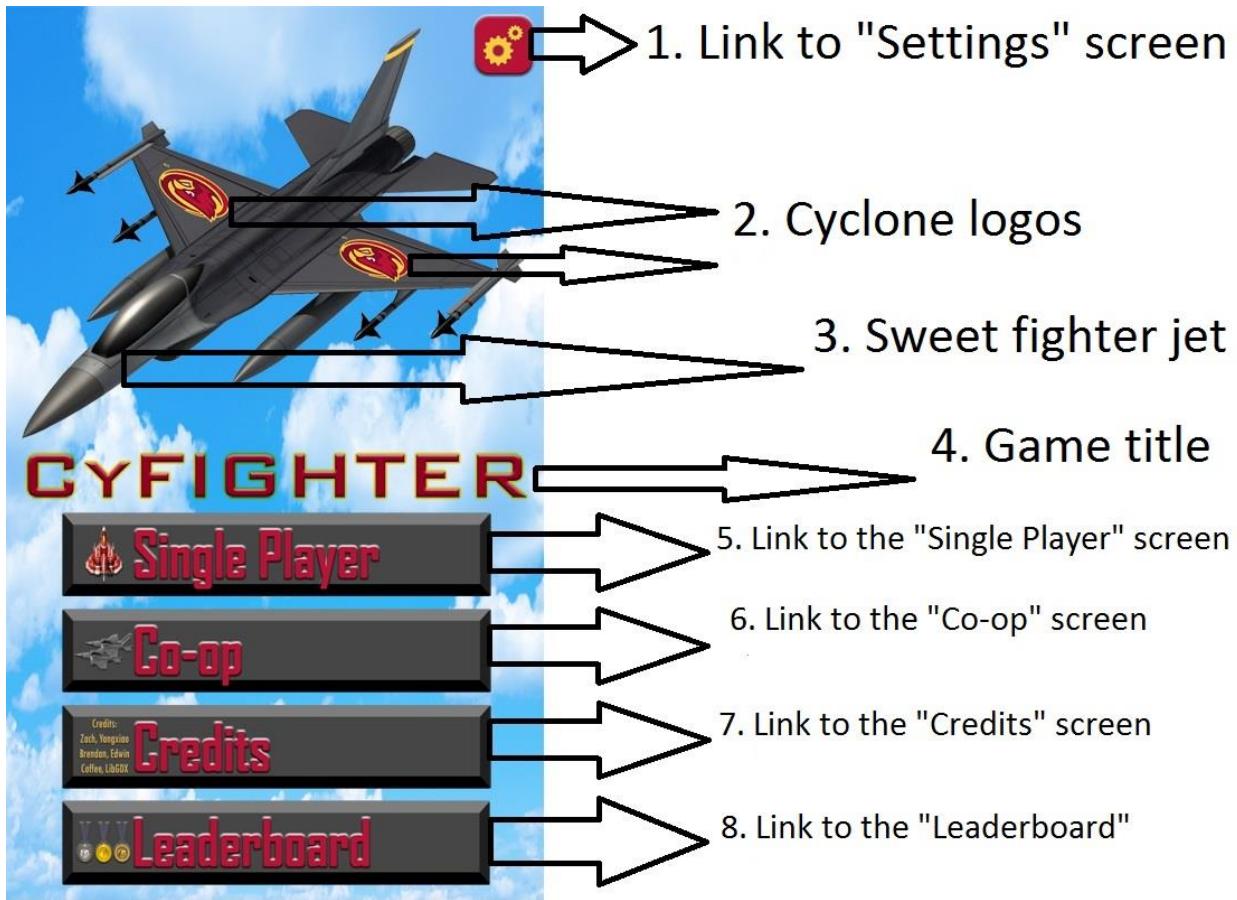
Maintainability - The program must log all errors and common transactions for maintainability. The code must be robust and understandable to allow additional changes and bug fixes that may occur after the program’s release.

Portability - The program must be compatible with Android mobile devices with operating systems up to Android 6.0. The program must use Java code that will translate properly into working Android code. In addition, the program must use software compatible with the Android SQLite database for updating and storing information.

Database Connectivity - The program must successfully update and read the Android’s SQLite database. The connection between the program and database must be secured and not vulnerable to outside attacks.

Networking - The program must use proper networking standards to allow multiplayer and posting/reading of high scores. The information sent from and to the server must be secure and not vulnerable to outside attacks.





This is the “Start Menu”. It is the screen the user is first greeted with upon loading of the game. The screen gives the user a feel for what to expect from the game.

1. This button (using an ActionListener on a transparent LibGDX Rectangle object) will direct the user to the “Settings” screen. The “Settings” screen is its own entity, so I won’t go into its details.
2. These logos on the wings of the jet have a special functionality. They will also use ActionListeners (actually, all of the buttons on this screen will. So from here down, assume all redirects to different screens are result of an ActionListener). When these Cyclone logos are touched in a specific pattern (For example: left, left, left, right, right, left, left, right, left) a dialog menu will pop up for Debugger and Admin login.
3. This is a picture of a sweet fighter jet. It lets the user know our game is really cool.
4. This is the title logo of the game. It is centered vertically and horizontally to show its importance.
5. This button will direct the user to the “Single Player” screen.
6. This button will direct the user to the “Co-op” screen.
7. This button will direct the user to the “Credits” screen.
8. This button will direct the user to the “Leaderboard” screen.



1. Displays the current rewards/awards amounts accrued total.
2. Displays the level selection for the ten levels. A level has a lock icon associated with it if it has not yet been unlocked. Each level selection icon will use a transparent object with an ActionListener. It will link to its respective "In-Play" screen.

Difficulty Selection
Edwin Benggawan



The Difficulty Selection screen appears after the users choose a new game. There is a “back” button (1) in case they want change their decisions. Also, the user can go to Settings screen by hitting the “settings” button (2) to change the music and/or sounds volume.

There are three levels of difficulty: easy, normal, and hard (3). The users will be taken to the Level Selection screen after they tap one of the difficulty levels.



015



075



2

3

Aircraft Selection



Standard aircraft.
Trustworthy vessel built by
the finest engineers at
Iowa State

Health:



Lives:

3

Special: NONE

4

Weapons (Select 3)

- Standard bullets.
- Guaranteed results!
-



Scatter shot.
Reaches a large range of enemies



Shoot a continuous beam.



100



10

1

5

Bombs



Standard aircraft bombs.
Good for any fight!



Large Explosion
Range but start with fewer bombs



Small explosion range but start with more bombs



50



8



25



4

6



10

x3

7

READY FOR TAKEOFF!

START

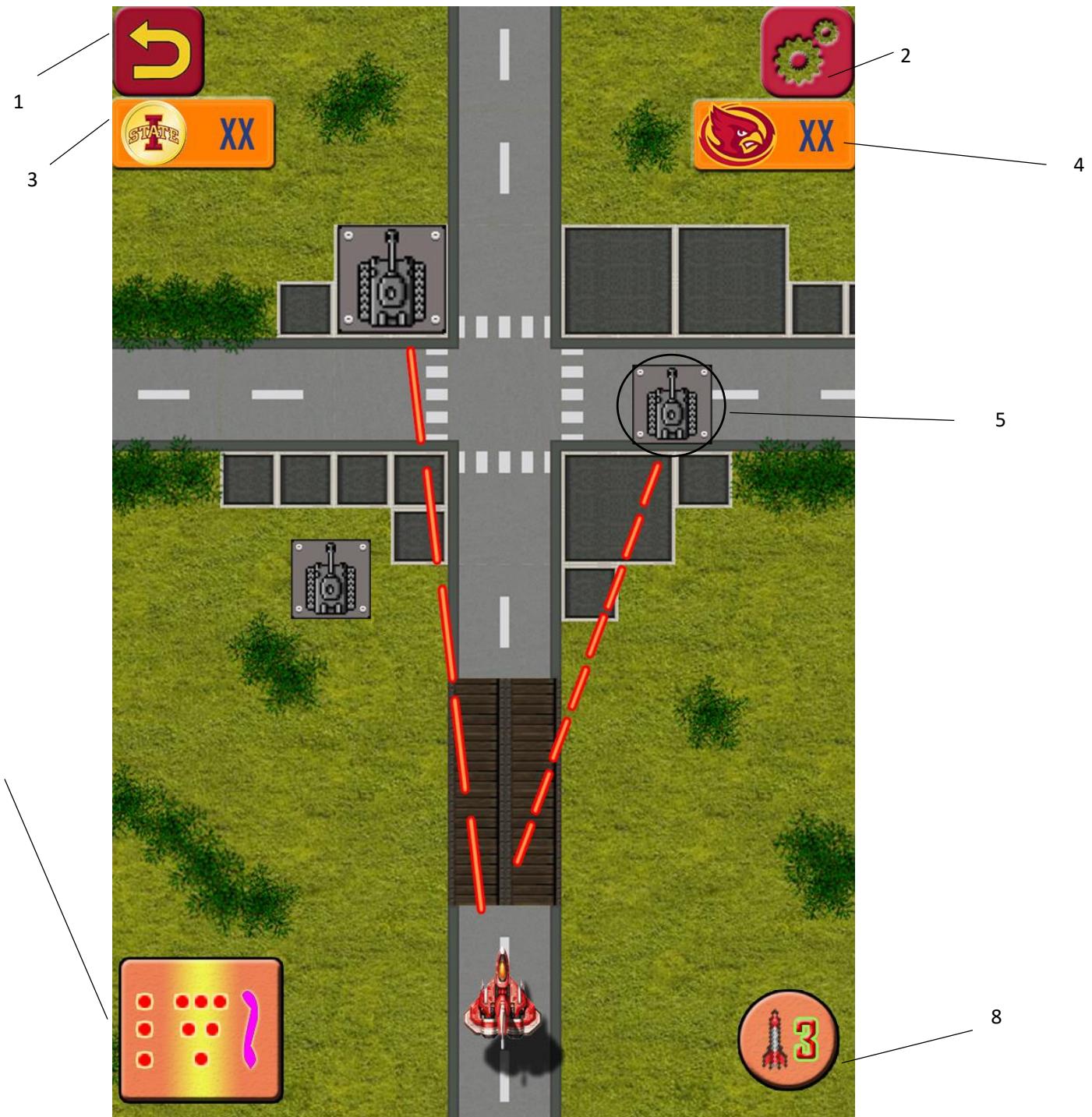
The Select Aircraft screen will allow the player to choose aircrafts, weapons, and bombs.

Some items are locked (1) and all three may be bought with in game currency/tokens (2). Aircrafts (3) contain a health bar of a specific size and a number of lives. An aircraft may also have a special ability. For example one might allow the player to gain an extra life when reaching a certain score or become invincible for a period of time when life bar is almost depleted. The player is allowed three types of weapons during game play (4). Three must be selected to proceed. The bombs come with their own abilities and quantity (5).

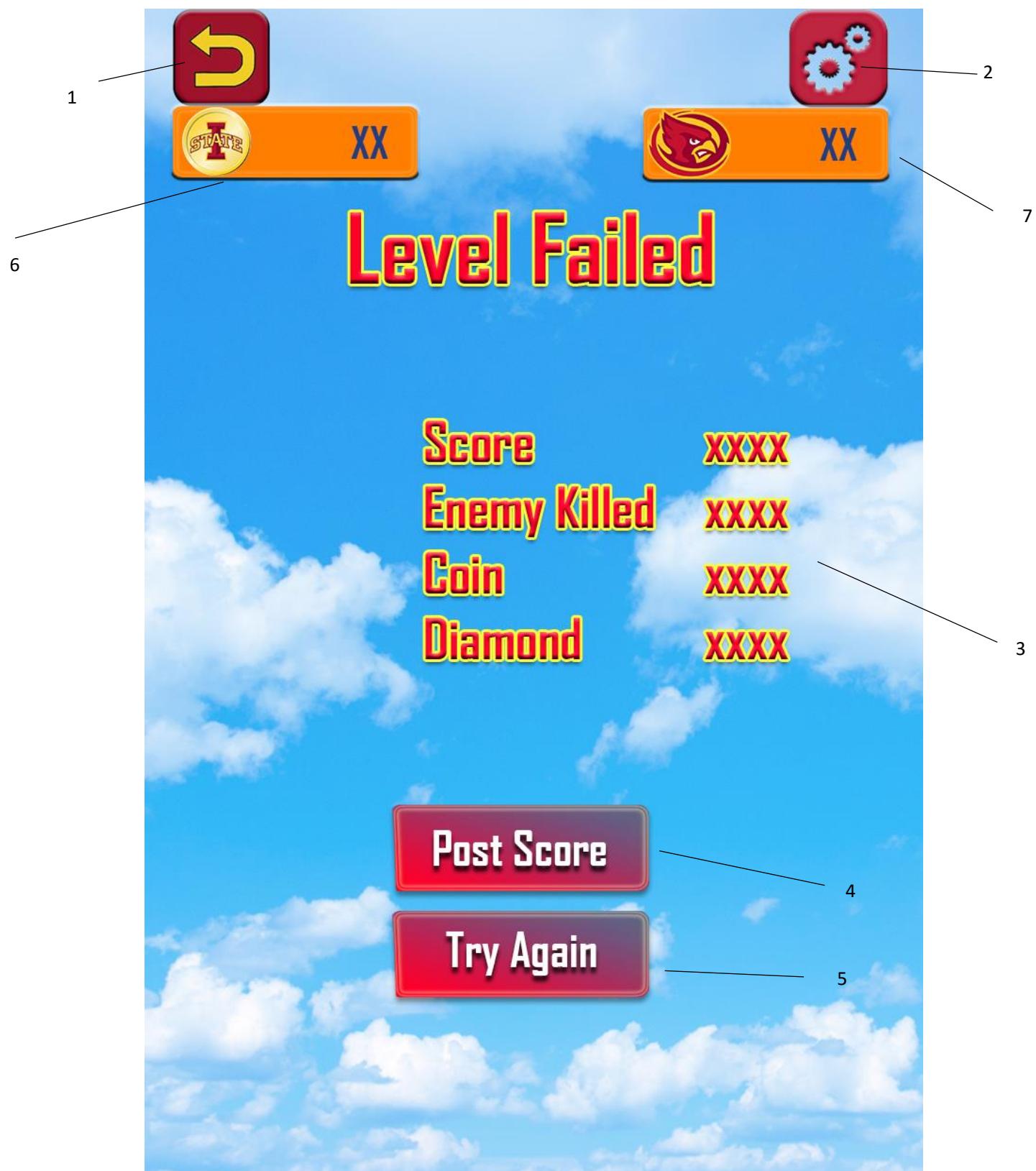
All selections are displayed at the bottom of the screen (6). Notice that the player cannot proceed to the next screen until the "Ready for takeoff!" message appears (7).

Gameplay Screen

Yangxiao Wang



This is gameplay screen. Player can go back to main menu through back button (1). Go to settings (2). See the total coin and diamond they have (3 and 4). Encounter enemy (5). Change attack mode (7). Use bomb (bomb can do a lot more damage than normal bullet. And bomb can destroy low armor units on the whole screen) (8).



The level failed screen displays after player failed at a level. Player may fail after several death (player can have more than one lives in a level). The

user may press back button to go back to main menu (1). Go to setting screen by pressing the setting button (2). See current level score, enemy killed, coin gained and diamond gained (3). User can press post score button to go to Leaderboard screen (4). User can also try current level again (with coin or diamond) (5). User can also see the total diamond and Coin he/she have (6 and 7).

1

Leader Board

Easy

Normal

Pro

View Co-op Scores



BSM 1000030



BOB 1000020



JIM 100090



SHM 100080



MOM 100070



DAD 100050



GJD 100045

2

3

Difficulty:

EASY

My Score:

100020

Initials:

JIM

4

Choose Emblem:



Post My Score

5

6

Leader Board

Player 1

	BSM	JIM	
	BOB	LAR	
	JIM	MOM	
	SHM	MMM	
	MOM	DAD	
	CJM	MJM	
	MAM	KAM	100045

Leader Board

Player 2

	BSM	JIM	1000030
	BOB	LAR	1000020
	JIM	MOM	1000050
	SHM	MMM	1000080
	MOM	DAD	1000070
	CJM	MJM	1000050
	MAM	KAM	1000045

Difficulty: EASY

My Score: 100020

Initials: JIM

Choose Emblem:

Post My Score

Difficulty: EASY

My Score: 100020

Initials: BSM

Choose Emblem:



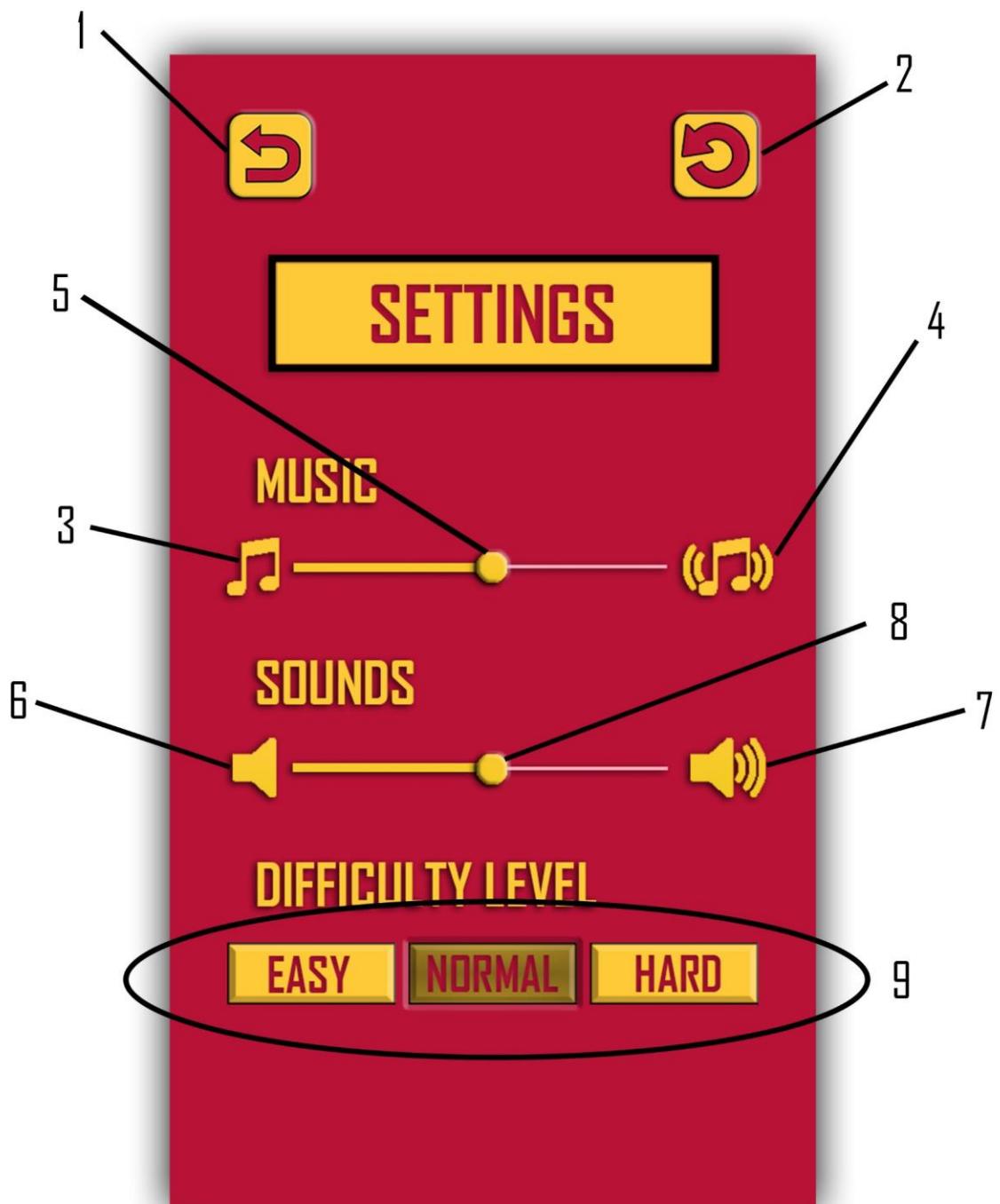
Post My Score

The Leaderboard screen can be accessed through the main menu screen or after the game over screen. If accessed through the main menu, the player can view worldwide co-op scores and single scores as well as scores for different difficulty levels using tabs

(1). The list of scores can be scrolled through (2). If accessed through the game over screen, the player can post their score to the leaderboard (3). Scores can be posted with special emblems and the player's initials. The emblem can be tapped to change (4).

The Leaderboard Co-op Screen displays the Leaderboard after the game over screen for co-op play. Both players post their combined score with their own emblems (5). Player 2 sees a screen labeled "Player 2" at the top (6). Note that both must post before leaving the screen.

Settings
Edwin Benggawan



The Settings screen appears when the user hit the “setting” button. This is the only screen that doesn’t have “settings” button at the top right, and a “reset” button instead. Users can back to the exact page before they go to this settings screen by hitting the “back” button (1). “Reset” button (2) can be used to revert all settings to default.

If the “mute” button (3) is tapped, the music volume will become 0%. This also applies to sounds “mute” button (6). On the contrary, the sounds and music volume will be 100% when music (4) or sounds “full volume” button (7) are tapped. Users can also move the sliders to a certain point. In the very beginning of the program, all sliders are at the half volume.

After the users choose the difficulty level in the difficulty selection screen, they may change it again in the middle of the game. There are easy, normal, and hard buttons (9) to select. Anyway, the difficulty levels option will only appear when the users tap the “settings” button at the middle of each stage level.