

Battle City – User Manual

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Problem Statement

Battle City is a really interesting and challenging game that we all love. Our goal is to recreate the original game as much as possible and eventually build our own version of it so that we could provide the players with different experience for the classic game.

Introduction

Battle City is a really popular and classic video game that was created in 90s. The player needs to destroy different enemy tanks, while trying to keep them away from his or her own base. The player will start the game with basic tank and after winning each battle, the tank could power up and update to more advanced and powerful tank. In each round of the game there are different types of enemy tanks that will attack the player's tank and try to destroy his or her's base. Obstacles such as rivers, trees, steels and bricks in the game are something that the player could use to protect themselves and take advantage of. When the player does a good job on destroying enemy tanks, some awards will occur randomly on the screen to help the player to win.

Motivation

Battle City is one of our favorite games during childhood. It was once hard for us to stop playing it. We really love the game so we want to make a similar one and add our own ideas and features into the game. Some of the levels were hard in the original game and it was frustrated when we could not pass them. Once we implemented our own version of the game, we could easily manipulate different parameters and add other exciting features for the players to really enjoy the game.

In order to provide the players with a better and different experience to the game, we collected many user stories. Users would like to have different controls to the game and be able to pause and restart the game. Figure 1 is a UML Use Case diagram for our system. The game is offline and the players could have different controls and actions to both the tank and the game.

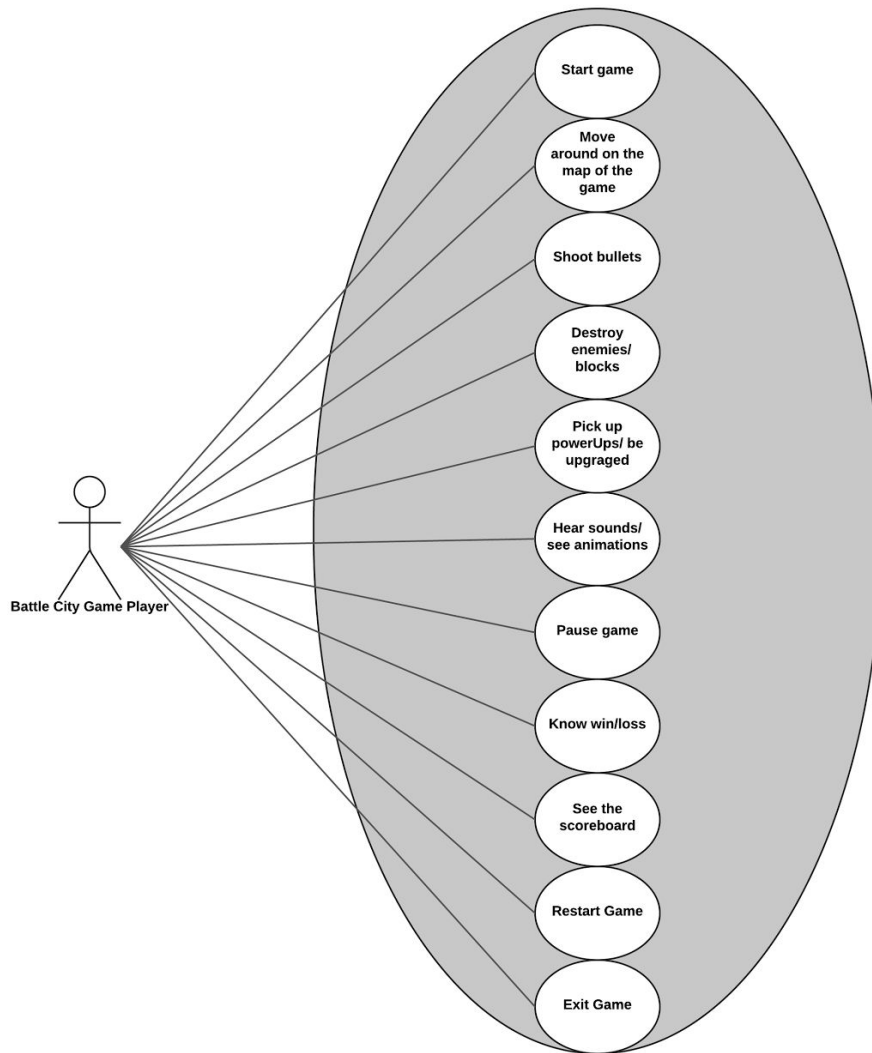


Figure 1: UML Use Case diagram

Instructions

Controls

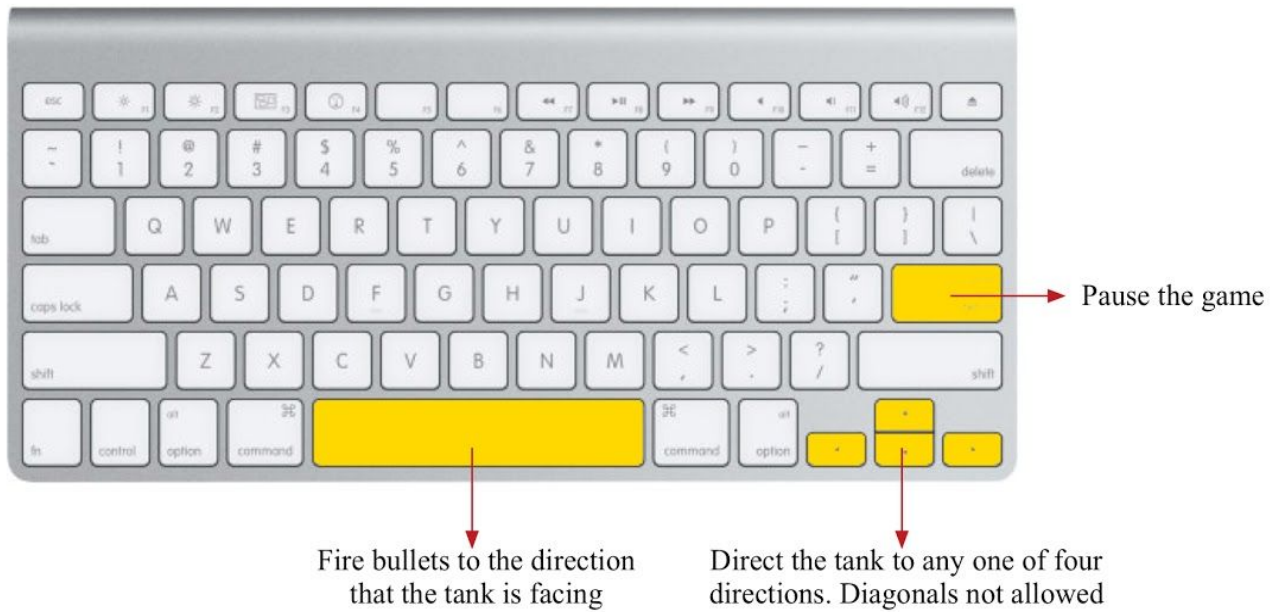


Figure 2: Controls of the game





Tanks

Player








This is the tank that the player controls. The player could use the arrow keys to move around the tank.

Enemies

	Basic Tank	This tank shoots bullets slowly and move slowly. Can be destroyed when hit by bullet one time. (Lives: 1)
	Fast Tank	This tank shoots bullets normally and move fast. Can be destroyed when hit by bullet one time. (Lives: 1)
	Power Tank	This tank shoots bullets fast and move normally. Can be destroyed when hit by bullet one time. (Lives: 1)
	Armor Tank	This tank shoots bullets normally and move normally. Can be destroyed when hit by bullet four times. (Lives: 4)





Power-Ups

A powerup will spawn at the location where the enemy that carries the powerup is hit. The 4th, 8th, etc enemy tanks that appear on the screen each stage carry the power-up. The powerup will disappear after several seconds. Collecting different power-ups will have different effects to the player tank.

	Grenade	A grenade will kill all the enemies on the screen.
	Helmet	A helmet is a shield that will prevent the player from the attack of the enemies. When the player has the helmet, it could also attack and destroy other enemies.
	Star	A star will upgrade the player's tank.
	Tank	A Tank powerup gives an extra life to the player.
	Timer	A timer pauses the movement of all the enemy tanks on the screen.

Environment

There are 4 different types of obstacles scattered around on the map each stage. The player could take advantage of the obstacle to hide or destroy enemies.

	Brick	<ul style="list-style-type: none">• Tanks and bullets cannot pass through this.• One brick can be destroyed by being shot by one bullet.
	Steel	<ul style="list-style-type: none">• Stops tanks and bullets completely.• Can only be destroyed if the tank is upgraded.
	Trees	<ul style="list-style-type: none">• Obfuscates tanks and bullets under it when moving through.
	Water	<ul style="list-style-type: none">• Tanks cannot move through this.• Bullets can fly across.

Walkthrough



This is the menu when the player first enters the game. After pressing “Enter”, the game starts.

On each level your goal is to destroy all enemy tanks as they spawn before they can destroy you or your base (represented by the eagle statue).

The enemy AI will target you if they have a line of site. A good strategy is to hide in cover near your base and shoot enemies as they get near.



This part shows how many enemies are left for you to destroy. In order to pass this stage, you need to destroy all these enemies.

This part shows the number of extra lives that you have for the entire game. Lives will not be reset for each stage.

The number next to the flag shows the current stage number. Compete with your friends and see who could finish all the stages.



This is the scoreboard that will be shown at the end of the game. It tracks the number of different tanks you destroyed. It will encourage you to perform better next time.

This restart button is where to restart the game. The game will reload the menu if you click it.

For exit the program, you could simply close the game window.

Enjoy your journey at the Battle City!