When Planes Collide

User Manual

Introduction

This manual aims to give a brief overview into what you can expect when you begin playing When Planes Collide. The game is based upon the role of an Air Traffic Control Officer (ATCO) where you are tasked with controlling multiple aircraft as they travel through your designated airspace.

The aim is to guide the aircraft through their assigned waypoints and out of their given exit point all while avoiding collisions with other aircraft.

The rest of this guide will explain the concepts, controls and features of the game. If you have any further questions, feedback or comments feel free to contact the development team below.

Enjoy the game!

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Set Up

Recommended System Requirements

Operating System: Windows 7
Processor: 1.6 GHz Dual Core
Memory: 2 GB
Input: Mouse

Software Installation

1. Install the latest Java Runtime Environment Runtime 7 from Java's website
   www.oracle.com/technetwork/java/javase/downloads/java-se-jre-7-download-432155.html
2. Download When Planes Collide source code.

Running the Game

To set up and play the game it couldn't be simpler. Download the content from our website
http://seprgroup.github.io/#downloads Then double click the
game.jar file to execute. This will bring you to the main menu of our game ready to navigate your planes
through the sky!

Software Installation from Source Code

1. Install the Eclipse IDE
2. Download When Planes Collide source code
3. Load the Eclipse project into the program
4. Open the 'game.java' class located in the stateController package
5. From the top tool bar select Run -> Run As -> Java Application

Menu Navigation

Main Menu
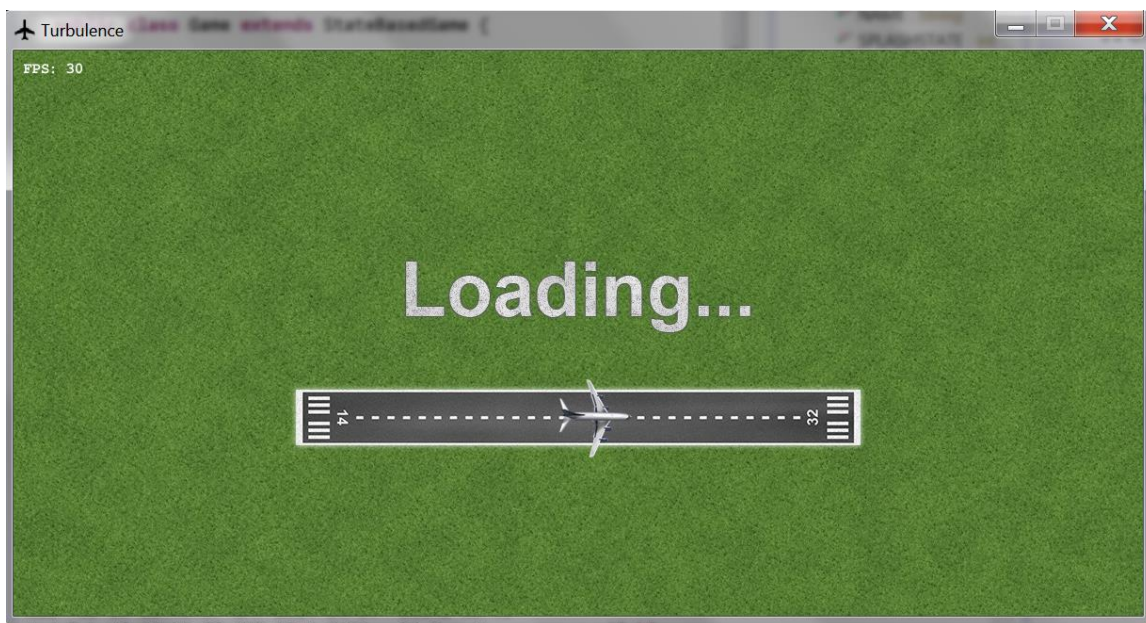
Once the game has been loaded, one is presented with the screen below.
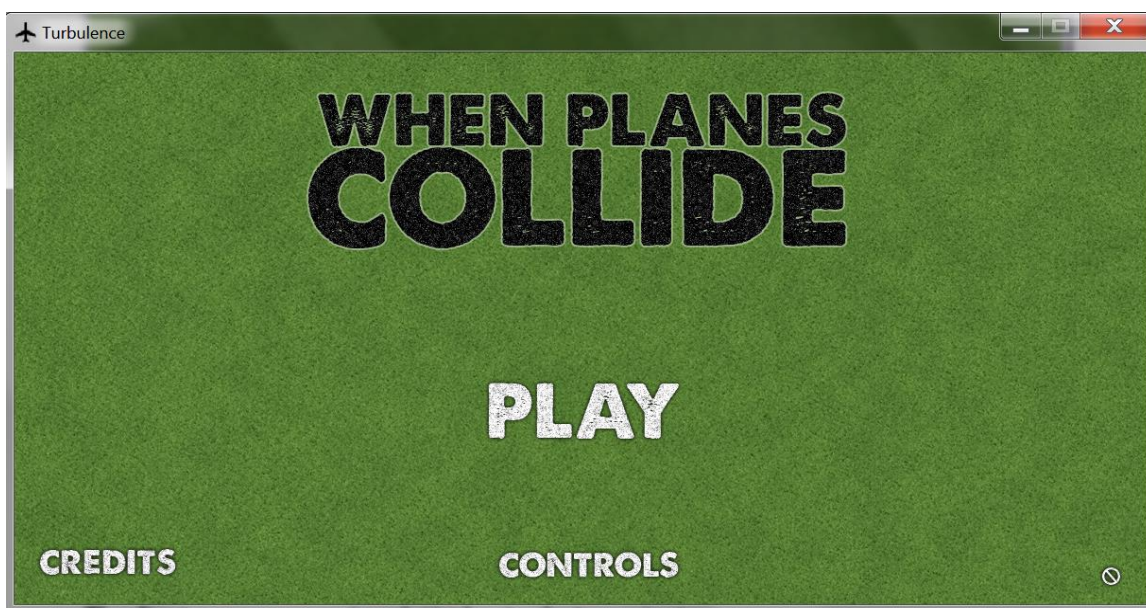
The first menu screen is relatively simple to navigate. To play the game you just need to press the button PLAY. If you need to know how to control the flights, CONTROLS contains all the information. All the credits for graphics and sound are put in CREDITS.

Playing the Game

Basics

After choosing the PLAY, you can select the different difficulty level starting from easy to medium and hard.
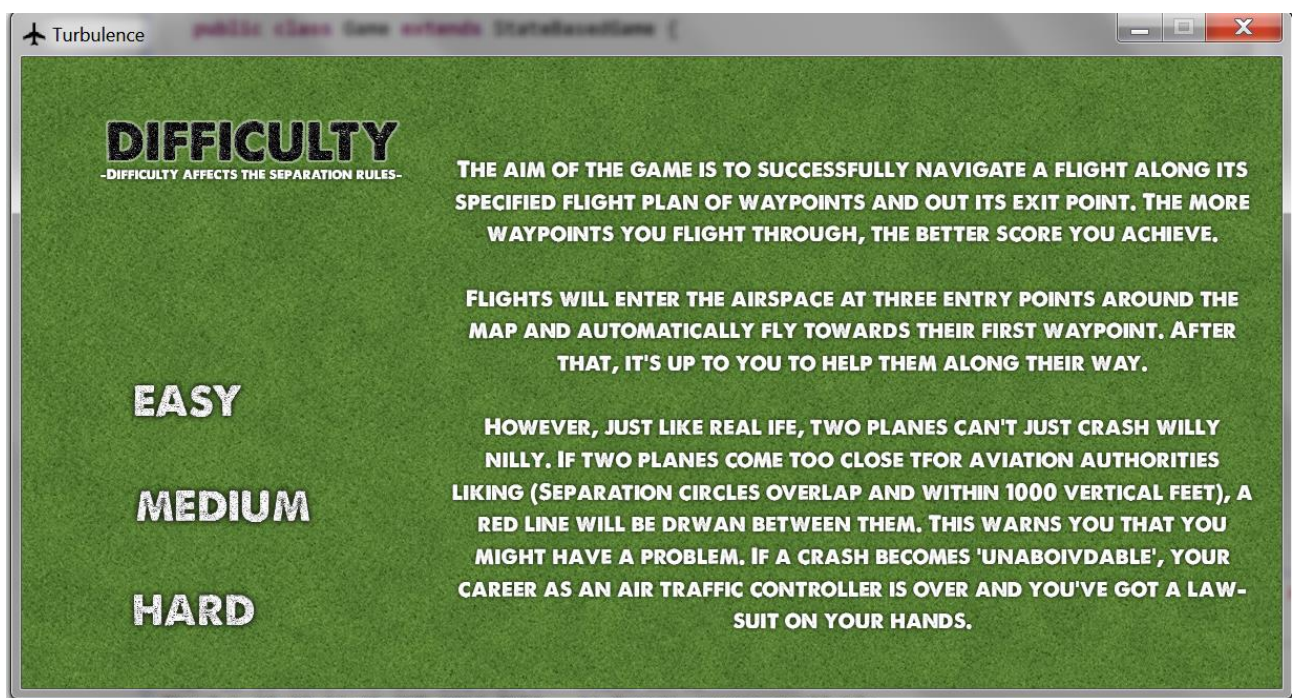
Radial Menu

Land

You can simply land the plane by pressing the Land button

Altitude

The altitude option allows you to change the height at which your plane is flying. Just click and move the point on the bar on the right side of radial menu

Bearing

This option allows you to select the bearing, or direction, that a plane is travelling in – perhaps the most useful as it allows to navigate your planes through their flight plan.

You can modify the bearing once you have selected a circle around the plane on the radial menu. You simply click on the point on the circle you wish your plane to turn to, and it will carry out your order.

Speed

This option allows you to change your aircraft's speed from 200 knots to up to 400 (this is due to minimum and maximum plane speeds). Upon selecting this option, simply select the speed you wish to fly at and your plane will change speeds accordingly. All planes start at a random cruising speed.

Scoring

You get 60 points for every minute on the minute, for every waypoint pass through within 30x30 pixels you get between 20, 50 and 100 depending on how how close you are.
The negative points are given when you change the flight plan -20; when you loose the plane or it does not go through the exit point -50.
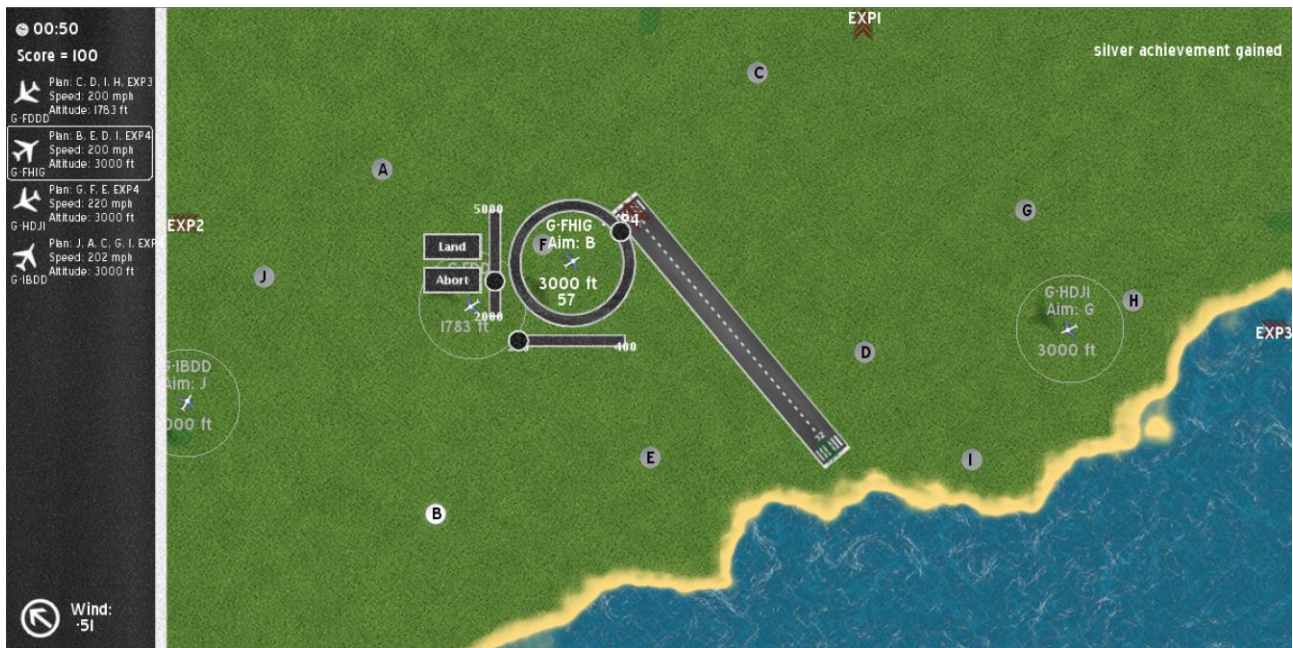
Achievements

Achievements are given when you :
• Reach 10,000 points (Silver)
• Reach [x] minutes (Silver)
• Go [x] minutes without losing a plane (Silver)
• Have 10 planes on the screen and guide them all through their routes, without crashing or losing any (Alien Achievement?) (Gold)
• Crash a plane within 40 seconds (Bronze)
• Land [x] planes (…)
• Change a Flight Plan (Bronze)
• Complete a Flight Plan (Bronze)
• Reach 100,000 (Gold) [Alien]
• Complete All Other Achievements

Separation and Violation Rules

If two planes come too close for aviation authorities' liking (Separation circles overlap and within 1000 vertical feet), a red line will be drawn between them. This warns you that you might have a problem. If a crash becomes 'unavoidable', your career as an air traffic controller is over and you've got a lawsuit on your hands.

End Game
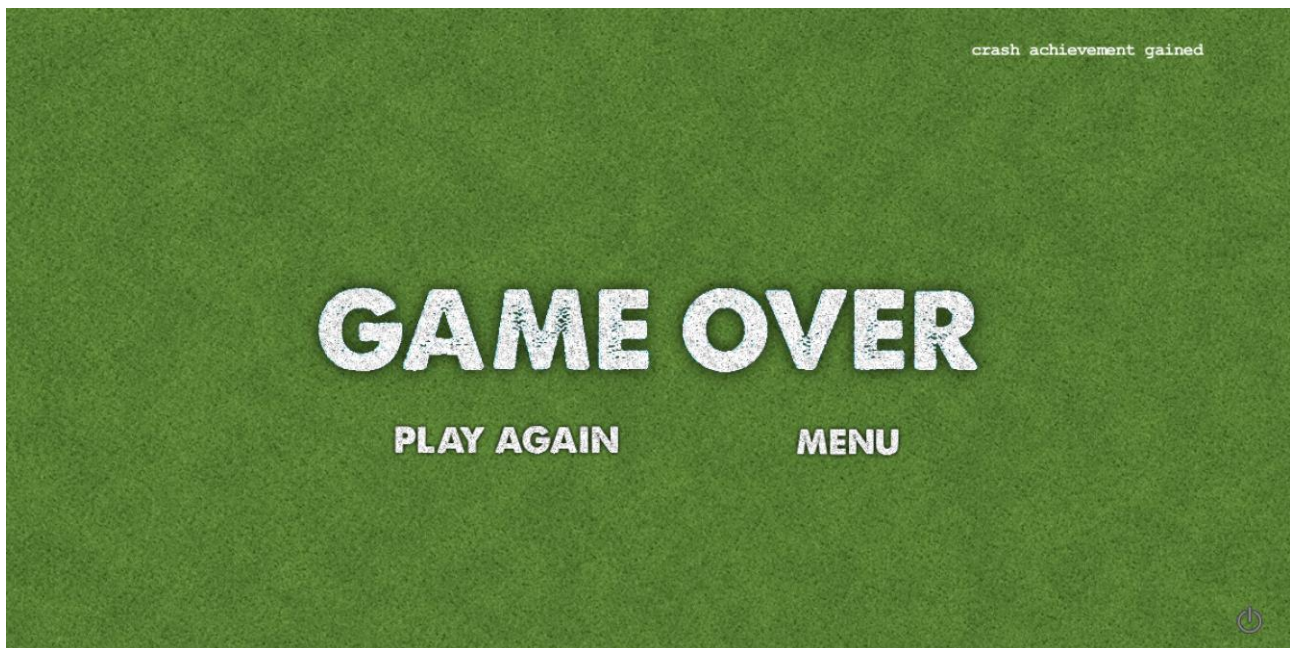
As is evident in the previous images, the time is tracked and shown at the top of the screen. The aim of the game is to complete flight plans while avoiding crashes. The longer you succeed at doing this, the better you are at the game. You automatically lose the game if two or more planes collide. Once the planes collide they will explode as shown below. The game will then come to a halt. To restart the game, simply choose Play Again!

Glossary

Achievements - trophy for every accomplishment
Altitude - distance the flight is above the ground
Control Circle - circle around a currently selected flight
Control Hub - panel on the left of the main game screen
Entry Point - a point where flights will enter the airspace
Exit Point - the final objective of a selected flight
Flight - any aircraft in the players airspace
Flight Plan - the route through the airspace. Includes waypoints and entry/exit points
Heading - bearing between 0 and 360 that the plane is flying
Radial menu - used to control the flight
Waypoint- a static point on the map, used for navigation

Credits and Acknowledgements

All graphics, code and testing was done by the members of team PSA.

Music was done by Karolis Lisauskas.