# Project Design Document

*9/6/2023*
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## Project Concept

| **1** **Player Control** | You control a | | in this | |
|---|---|---|---|---|
| | *Passenger* | | *airport* | game |
| | where | | makes the player | |
| | *Keyboard and mouse are used to* | | *Move and interact with objects* | |

| **2** **Basic Gameplay** | *types of objects* | *area(s) of the screen* |
|---|---|---|
| | **Passenger** (who the player can control them to walk, run, turn, and jump) | Located at the centre of the screen. The game view is third person and always follows player movement. |
| | **Roads and Cars** (which player need to avoid cars when crossing roads to get to the airport) | In front of the airport. They will be shown in the whole screen when the player gets to this area. Part of **level 1**. |
| | **Check-in counter** (which there are many and the player must find the right one) | Near the airport gate.  Part of **Level 2.** |
| | **Baggage and items** (which player need to organise them well to avoid overweight) | Baggage and items are not shown in the main scene and if the passenger want to manage their baggage, the game will go to another a 2D game view where there are 3 transparent bags, and some items represent by rectangles with different sizes and texts showing their weight. And player need to drag these all items into the bags and ensure none of the bag is overweight. Part of **Level 2.** |
| | **Customs** (player need to memorise what good they are carrying, and the customs will ask the player some question) | After pass the check-in stage. Part of **Level 3.** |
| | **Border Force and documents** (player need to find all missing documents required by the boarding force to pass) | After pass the customs stage. Part of **Level 4.** |
| | **Terminal** (it is like a labyrinth with minimal guides and the player need to keep trying and using tricks to find the right path to the boarding gate) | After pass the border force stage. Part of **Level 5.** |

and the goal of the game is to

| *Get to the boarding gate to catch a plane in 15 minutes* |
|---|

**3**

**Sound & Effects**

There will be sound effects

*Walking and running sounds.*
*Car driving sound*
*Sound of moving items*
*Sound of picking up items*
*Celebration Sound when the player finishes a level.*
*A nervous background music*
*Ambient sounds in different area (outside the airport, inside the airport)*

and particle effects

*Dirt created from player's foot when the player runs.*
*Explosion created when player crashes into a car*

[*optional*] There will also be

*Different animation for a walking, running and idle player*

**4**

**Gameplay Mechanics**

| Description of gameplay mechanic | Effect of gameplay mechanic |
|---|---|
| Player has 100 stamina. Running costs stamina (-20/s). Walking (+20/s) and idling (+40/s) recover stamina. | Avoid play from running too fast all the time. Increase difficulty and prompt the player to make decision on when to save stamina and run fast. |
| Time limit on boarding | Mirroring real-life boarding urgency. Make the game challenging and avoid the player from making too many trials without think about tricks to pass the game. |
| Must finish a previous level task before proceeding to the next area of the map, i.e., check-in -> customs -> border force -> terminals | Aligned with the real-life experience. Avoid players from finish the game too quickly. |
| Cars run in different speed and is being spawned in different location on the road. Car will ignore the player and may crash into player to cause the player to die. | Prompting players to avoid cars when crossing roads to get to the airport. The main challenges for **Level 1**. Create challenges |
| There are many checks in counter and only one of them are the correct counter for the player. Going to the wrong counter make the player lose 30s. | Create the challenge of finding the right counter. Part of **Level 2**. Prompting player to find clues around instead of keep trying different counter to find the right one. |
| Coins are spread throughout the airport and can be collected by the player | Can be used to buy boost up item in vending machines. Letting player to make strategies on what item they should buy |
| Boost up item, e.g., increasing speed, increase maximum stamina | Decrease game difficulty and balance the game, i.e., spending extra time on collecting coin and buying items will give player special abilities in return. |

[*optional*] There will also be,

*Optional tasks that do not need to complete to finish the game, but it will increase the player's finial ranking.*
1. *find a lost item in the airport.*
2. *help their friend buy a duty-free good in the store in the airport.*

*The outcome is given in form of score, based on how much time left.*
*There is also a ranking with a maximum of three stars, which attract players to play multiple time to achieve the highest score and ranking.*
- *1 star: get to the boarding gate.*
- *+ 1 star: find the lost item.*
- *+1 star: buy friend a duty-free good.*

## 5 User Interface

| The | will | whenever |
|---|---|---|
| Time remains shown on the middle top of the screen | decrease | A second has pass or the player is punished, i.e., going to the wrong check-in counter. |
| Three stars, representing the current ranking, shown on the top right of the screen | Light up | An optional task is finish |
| Balance number, shown on the bottom right of the screen | Increase/decrease | The player collects coins in the airport/buy things in the vending machine |

| At the start of the game, the title | will appear and the game will end when |
|---|---|
| Hurry! The passenger | <ul><li>Close the game windows.</li><li>Press the exit button on the title screen.</li><li>Finish or fail a game.</li></ul> |

## 6 Other Features

*The game includes a secret command enter interface that will show up when the player press the "Backquote" key or "`". This is mainly used for testing but also for player who really cannot pass a specific level.*

- *"skipbarrier1" will skip the challenge of crossing roads by teleporting the player to the airport gate.*
- *"skipbarrier2" will skip the challenge of organising baggage.*
- *"skipbarrier3" will skip the challenge of finding the right check-in counter to check-in by directly helping the player check in.*

# Project Timeline

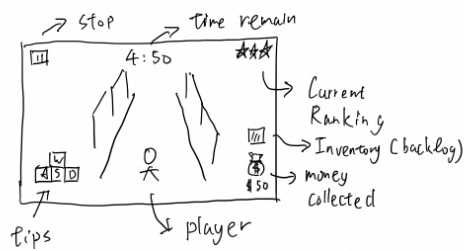| Milestone | Description | Due |
|---|---|---|
| #1 | - *Digital Prototype with basic scene set up and the player and camera can move around in the airport* | *9/7* |
| #2 | - *Prototype with Barrier 1 and 2 finished.*<br>- *Barrier 1: player need to crossroads to get to the airport.*<br>- *Barrier 2: check in their carrier baggage and make sure they are not overweighted* | *9/8* |
| #3 | | |

| | | |
|---|---|---|
| | - *Barrier 3 is finished: the player memories the goods they are carrying and answer the customs questions.* | *9/20* |
| **#4** | - *Barrier 4 is finished: the player needs to select some documents (i.e., passport) from many messy and unrelated documents in their bag and hand over them to the boarder force* | *9/30* |
| **#5** | - *Barrier 5 is finished: the player go into a maze and there are many exit but only one of them are the right boarding gate.* | *10/10* |
| **#6** | - *Beautify the game with textures. Previously, the scene may be constructed by many built-in block objects and each object only has one colour without any texture.* | *10/20* |
| **#7** | - *Game Testing: adjust gameplay mechanics to increase experience: time remain, how many coin is the game, how fast the player can run* | *10/31* |
| **Backlog** | - *Replace block objects (I used a lot of cubes to build up the scene, but they may need replace by pre-made objects with more detailed shape from the unity assert stores to create a more beautiful scene.*<br>- *Play different background music in different barriers.*<br>- *Different items. Player can buy different items from the vending machine in the airport which have different effects.*<br>- *Create randomness, e.g., cars are randomly spawn in the road (barrier 1). The initial arrangement of item in the three check-in bags of the passenger is different and the passenger need to arrange them to make sure none of it is overweighted (barrier 2).*<br>- *Game Saving* | *10/31* |

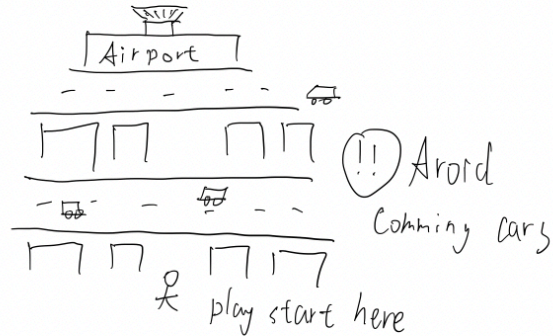# Project Sketch

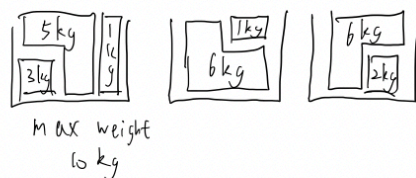## Hurry! The Passenger
Wednesday, September 6, 2023      20:36

UI:



stop →    → time remain

4:50    ★★★

→ Current Ranking

→ Inventory (backlog)

→ money collected

tips

player

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## Barrier 1: Crossing Roads to the airport



Airport

!! Avoid Comming cars

& play start here

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## Barrier 2: baggage check-in



5kg   1kg    1kg    6kg

3kg    6kg    2kg

Max weight 10 kg

player needs to move items between bags to ensure all items are carried and none of the bag is overweighted.

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## Barrier 3: Customs

① Memorise all important items and declare items
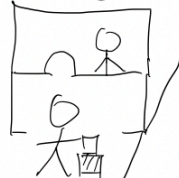
② The customs will ask question about the item



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## Barrier 4: Border Force



Messy

Important Documents

Border Force

Select 3 important documents according to the tips from many messy document

The time it takes to pass the border force depends on how many correct documents you have selected

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## Barrier 5: Maze

Play needs to find the right boarding gate



A64     B45

A30

A27    Start Here