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(website)

Design Document for:

BRAVO

“Just yell out!”™

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Design History

The design history records all adjustments of our whole design process. It includes the idea of theme, avatar change, element change, mechanism change and details.

Version 1.00

In the first version, we experienced 3 phases when deciding the theme.


Firstly, we assumed an avatar walking in a maze. In the maze, the width of the path is different equipped with many traps. If the avatar want to reach the destination, it must pass the obstacles. Kinds of “food” are randomly distributed in the maze. Avatar eats food to change body size. In details, if the avatar eat fruit, it will shrink and easily pass through a narrow path way. While, if the avatar is always in a tiny size, it could fall into the crack in the maze. At this time, players can move the avatar looking for hamburgers to become fatter and pass the trap.




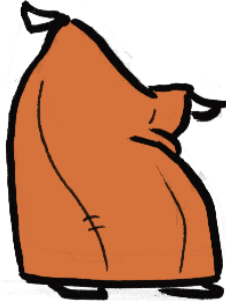
While, we considered several issues and then dropped this plan, here are some tradeoffs: The design of the maze is the most vital stuff. To make sure the playability, we want to give players excitement. While, the statistic mechanism can not meet this requirement. In addition, it is hard to make sure the game is interesting and challenging.

After that, we kept on using the mechanism which is avatar eating food. We planned to use an cute avatar running through some obstacles. During the process, the avatar eats fruit and hamburger to change its figure. It need to change the body size to accommodate to current situation. The food are hanged in the air, player need to yeel out to make the avatar jump to obtain food. Everyone supported this mechanism.

But there were somethings need to be modified. Another idea came up. In the last phase, the avatar were changed to a bravo. He escaped from prison, running on the vehicles on road. The policy are running after to catch him. Once the bravo stays on one vehicle for a long period, the policy will catch up and shooting him. Or if he fails to jump to next vehicle, he will be injured when fall drown to ground. We kept on using the mechanism of audition control.

Version 1.10

	<ul style="list-style-type: none">- the first step when it is standing on the car
---	---

	<ul style="list-style-type: none"> - the second step when it is going to jump
	<ul style="list-style-type: none"> - the third step when it is in air
	<ul style="list-style-type: none"> - the fourth step when it is going to land
	<ul style="list-style-type: none"> - the fifth step when it is standing on the car

As the games in current market, most avatars are in small size and relatively round figure. The pictures below show the first vision avatar in our game. But after considering the game background, the character of the bravo should be nimble and slim. In addition, we want to make our bravo impressionable to players. Thus, we designed another version.

Version 2.00

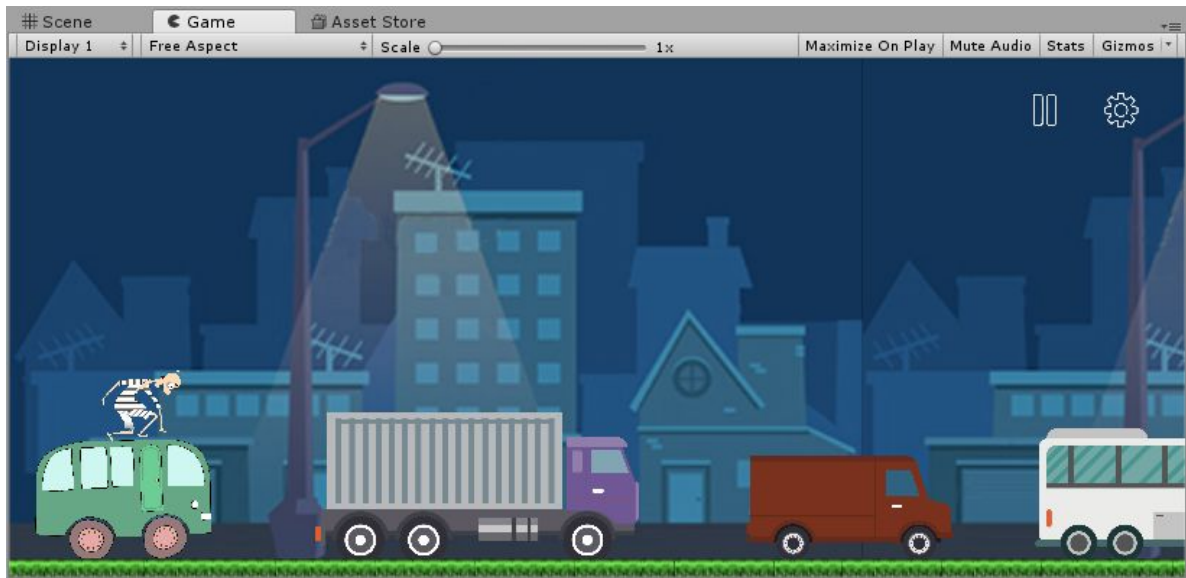


figure 1.1

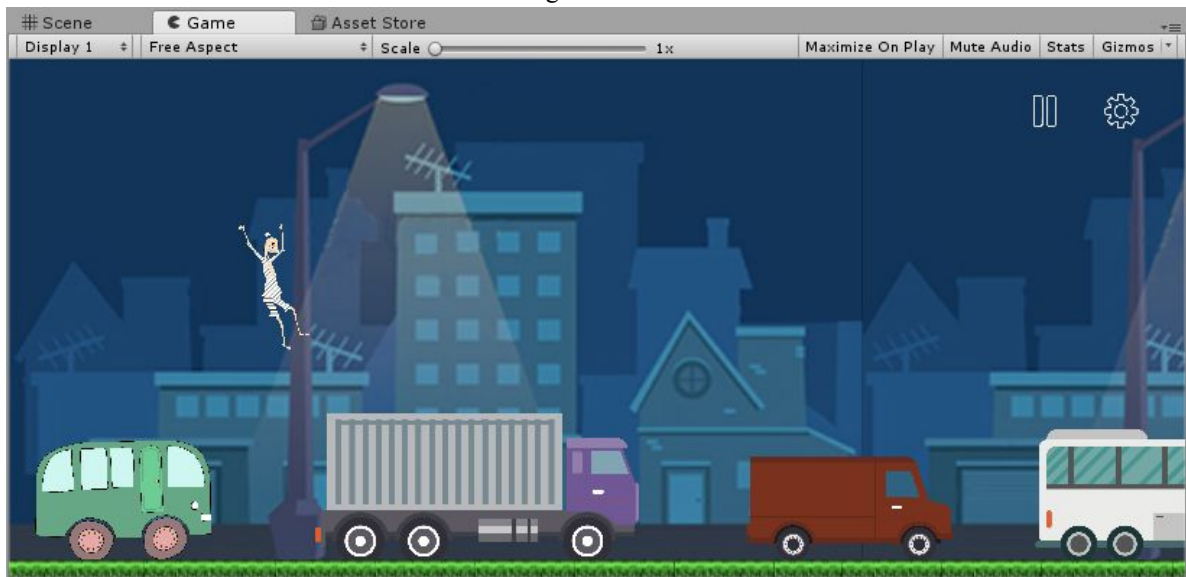


figure 1.2

Version 2.00 is the first version of the design where a major revision has been made now that much more is known about the game. After many hours of design, many decisions have been made. Most of these large design decisions are now reflected in this document.

Included in the changes are:

1. The figure of bravo is changed to a lean person with long arms and legs. This makes our bravo be more clownish.
2. We changed the scene of the game to midnight, which is a best time for bravo to escape from the jail. And this feature accommodates to the style.

version 2.10

version 2.10 is the final version of our design. We completed the mechanism of playing and UI elements design.

Included in the changes are:

1. The bravo will be killed by two methods, which are police car and fall down of a gap. We also added die animation when bravo is die.
2. We changed the style of each element. For example, our avatar and cars equipped black stroke initially. After applying them to project, we found the effect of strokes is terrible as figure 1.3 shows. Thus, we dropped the former scheme and change into current style.
3. We added light to every car. There are two benefit, it can not only enlighten our interface, but also enlarge the distance between two cars.
4. we added a choice page at the beginning, you can choose to play with voice or keyboard in this version. In the former version, player can only control the prisoner using keyboard.



figure 1.3 bad effect with black stroke

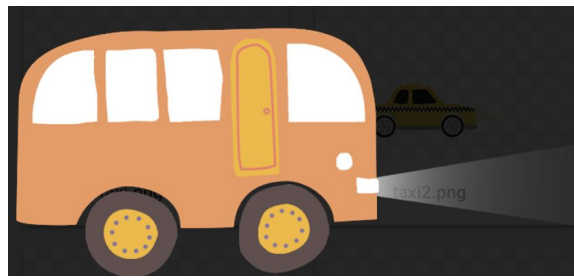


figure 1.4 current style



bad effect



bad effect



current style

version 2.20

2.20 version is the final version of our design.

Included in the changes are:

1. we added background music and some sound effect.
2. we completed the button and function. To make this game more interesting, we use a counting scheme to encourage player to keep on playing.

Game Overview

Philosophy

Philosophical point #1

This game is trying to explore a new way to play game. As game developing for last several decades, people are used to do hand-control operation in game. It is a new idea to use voice control game. Indeed, it is obvious that voice control is much more difficult than keyboard control when playing our game. This game will not try and change the world. We are going to change the way people playing running games.

Philosophical point #2

Though we call our game “Bravo”, which is a relatively positive word, the prisoner will finally be caught by police or fall down to the ground and get hurt. It is not ethical for a prisoner to escape the police. So the prisoner would finally caught by the policeman. Besides, jumping over the moving car is extremely dangerous.

Philosophical point #3

As we designed two game modes, which are "play with keyboard" and "play with voice", we thought that it could also be played with disabled people who could not use keyboard to play it. We think it is a unique feature for our game which it is fair to think about the disabled audience.

Common Questions

What is the game?

This game is a 2D endless running game, it aims to make players feel breathtaking and yell out their feelings by our special voice control mode. In our game, you will act as a bravo. To escape from the police and stay alive, you have to keep jumping on the top of vehicles.

Why create this game?

At the beginning, one of our group members played one game called YASUHATI, which is a website game controlled by the voice. We think this feature is unique so that we have the origin of our idea. However, YASUHATI's mechanic is too simple to provide a durable game experience. Also, the aesthetic is not good enough neither. In the result, we proposed our game design, which combine the voice control with the running game.

We think our game's audience could be the children, as well as the teenagers. As the game is easy to handle and is unique to other games, it would absorb a group of children and teenagers to enjoy it. So there must be a hole in the market for BRAVO. Also, disabled people could play it with voice.

Where does the game take place?

The scenario happens on the street, show as 2D side view. In our game, you can see a street with different vehicles like car, truck, bus, SUV and so on. Also, new vehicles will be generated as the camera of the character moves.

What do I control?

There is only one character which the users need to control called Bravo. The player will control the bravo walking and jumping, through two game mode. For the first game mode, the user will use the keyboard. W key means jumping while A and D represents moving, which is similar to most running game. However, we also provide an original way of controlling --voice control. When your voice is lower than a standard, the character will move. When your voice reach that standard, our character will jump according to the tone and volume. The louder and higher pitched voice you made, the farther the bravo will jump. If players could not make voice or tap screen immediately, Bravo would be caught by the policemen behind him.

What is the main focus?

The main focus is to escape as far as you can. The farther you can run, the higher score you will get. Our focus is similar to other endless running games such as Temple run.

What's different?

There are many Parkour games in the market right now. In these games, there are some successful games like "Temple Run" and "Subway Surfers". But most of games are about the same view and same control. Users now are bored with this type of games. However, Our game is a definitely a revolution which is totally different from these popular games and we believe our game will revive Parkour games.

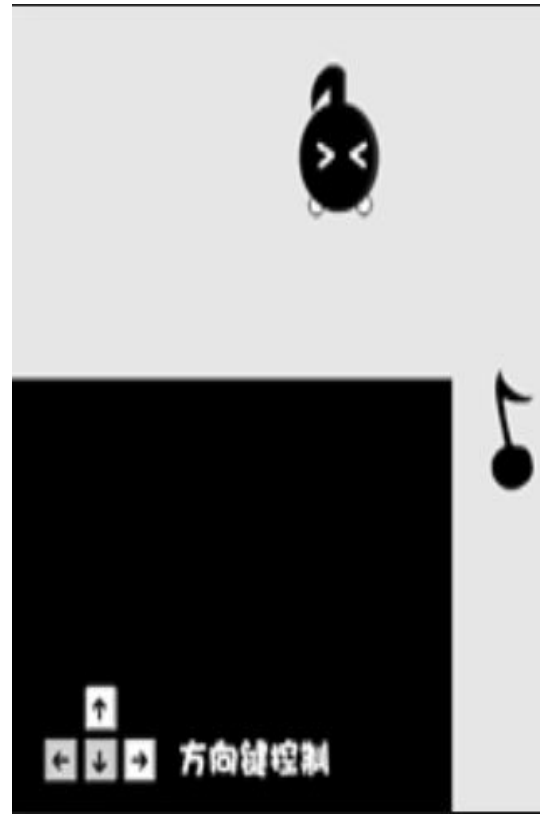
First of all, the most innovative point of "BRAVO" lies in the control. We combined voice input

with game control which lets users use “shouting” to play this game. Users could really experience the moods that the character face because this way brings users into the game while they are trying to shout to let their characters alive. Besides, users could gain much more joy than the running games which are just using keyboard. Imagine you are trying to adjust your voice to control the jump distance, how funny it could be! Furthermore, we also investigate voice control game in the market and found a game called YASUHATI which is also a voice control game. But this game is not Parkour game which players could not feel exciting from that game. In our game, users can indeed feel excitement.

Secondly, another difference was the player view. Successful games like “Temple Run ” and “Subway Surfers”, their views are second person view from the character's back while “BRAVO” is the Horizontal 2d game. As far as we know, there are many horizontal 2d game but few of the games are Parkour games. So our game will intrigue users interests and bring a totally different experience to players. Besides, BRAVO’s style is a retro style which is very simple and easy to play. Different from the games with vertiginous images, our game is simple and comfortable for any ranges of users.



Temple Run



YASUHATI

General Features

Players need to control an escaped prisoner to avoid being caught or jumping into the gap between the cars. There are two types of control in our game, voice control and keyboard control. Players’ ultimate goals are jumping further and getting higher points. So let’s move on!

Gameplay

The background story is about prisoner. The prisoner escaped from a jail in one night and when he escaped, the police noticed him and wanted to catch him. The reason our game called bravo lies in the character who jumps in the highway and doesn't fear to death. So our escaped game BRAVO borns.

The prisoner needs to jump between cars to escape from being catch. He will "die" when he moves too slow and catch by police or jump into the gap between each cars. He will "live" as long as he jumps and jumps.

Players could choose either keyboard control or voice control to play the game. Keyboard control is the most general way which is clicking space to jump between cars. The jump distance is defined by press time. The longer the player presses, the longer the character will jump. When select voice control, players could control the character by using different levels of voice. The higher player's voice is, the longer the character will jump. Players' ultimate goal is jumping and jumping to live longer and get higher points.

Through elaborately design, our character is well completed and will be showed in next part. Except the character, the environment things are also well designed. We have 7 different types of cars. Different cars have different altitude, users need to estimate the height of the cars as well as jump distance.

Furthermore, the background of our game is a dark night in a city, so the background is well attached with the theme and here is part of the background picture:



The Game World

Overview

This game describes a theft-escaping story. The theft, bravo, just escaped from jail and finally can breathe fresh air. However, the voice of police car came into his ears. The only thing he have to do is jumping over different vehicles to avoid catching by police.

World Feature

There are some different kinds of cars in this world that bravo can jump over. There are general car, big truck, bus and even super cars. Of course, there is a special car, police car always chase after bravo.

The Physical World

Overview

This game happens on a one-way road, all the cars are driving to the same direction, you can not jump back or driving in a different way.

Key Locations

The key locations is the road. All the things in this game happen on the road. The police car chases our character alongside this road.

Travel

In our game, the player have two ways to control our character. One way is that you can use keyboard to control the bravo. The other way is that you can use your voice to make the bravo move. Once you speak out, the bravo will jump forward. The louder you say, the further you can jump

Scale

Our game has a pretty large scale because in horizontal, it is an endless with various vehicles. And in vertical, the scenario can extend to the highest point the character can jump.

Objects

Objects in this game can be divided into two main aspects. One aspects is cars. There are general car, big truck, bus super cars, over which the bravo can jump. The other aspect is characters in this game. There are two main characters, bravo and police.

Time

General cars move slower than police car, so you can not stay still - in this case you will definitely be caught. You have to keep jumping, in case caught by the police.

Rendering System

Overview

We use Unity 2D rendering system to render our game..

2D/3D Rendering

The detailed process is like this. First you create a Game Object in the game. Then you attached a texture to it. The system will then render such Object using the attached texture.

Camera

Overview

We have two cameras for two scenes in total. Both are move in two dimension.

Camera Detail #1

The camera in the first scene do not move at first. After you make your choice of playing with keyboard or with voice. The camera moves vertically down from the sky to the road.

The camera in the second scene start moving as soon as the second scene is loaded.(The second scene is totally overlap the first scene after the first scene moves down) The second Camera follows the character all the time so the interface can include the character.

Game Engine

Overview

The game engine that we use is Unity. Unity is a cross-platform game engine developed by Unity Technologies, which is primarily used to develop both 3 dimensional and 2 dimensional video games and simulations for computers, consoles, and mobile devices.

Game Engine Detail #1

The game engine will keep track of everything in the world like character, road, vehicles ,voice, animation and so on.

Animation

The game engine will detect the character all the time. More detailed, the animator helps detect and change character's status. And according to different status, the animator will play different animations. Like, when your hand moves from one key or you make a voice, the status will change to jump and play jump animation. When the character touch the ground or be caught up by police, it will play die animation.

Collision Detection

Our game use collision detection between character and vehicles, character and ground, character and the police. Some are Box collider (like ground and character's foot). Some are polygon collider (like vehicles).

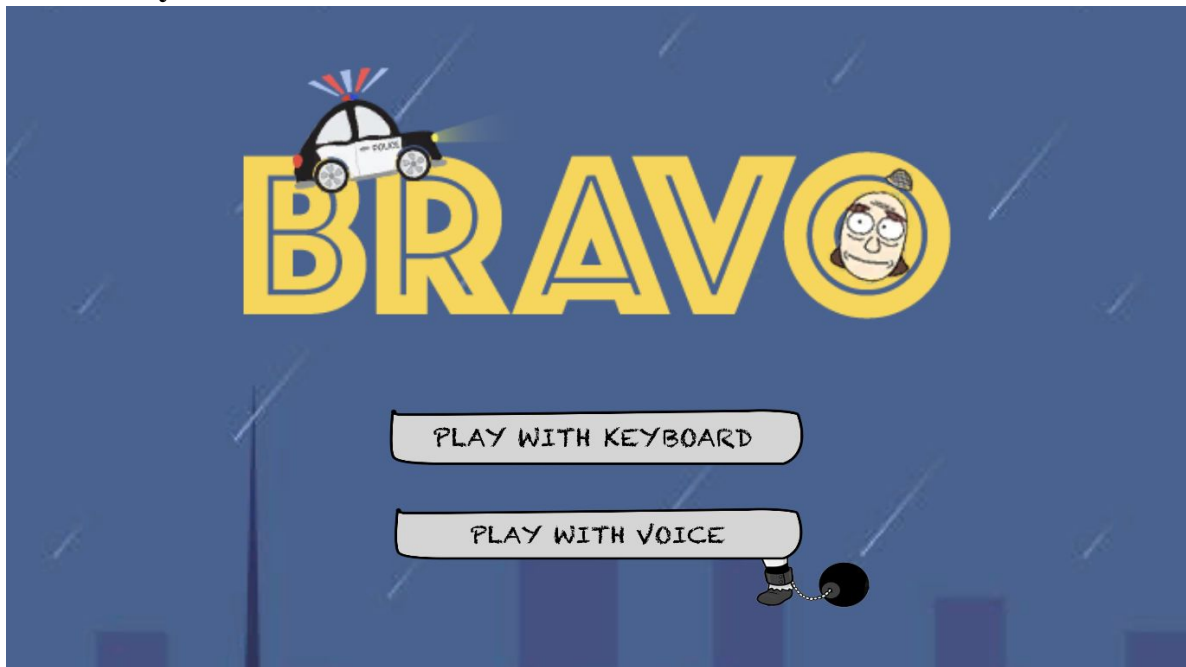
The World Layout

Overview

Game layout here are very briefly and easy to understand. We investigated some new players and

they can all find the functions easily. Here is our layout.

World Layout Detail #1



World Layout Detail #2



Game Characters

Overview

- Bravo: the prisoner who is escaping from the prison
- Policeman: the character who is catching the prisoner
- Cars: the prisoner is running on

Creating a Character

As the game mechanics we designed, it is important to choose a character to make the story rational. During the brain storm we thought what characters are suitable to this kind of mechanic. At first, we thought a chick who running on a conveyor belt. But the background would be too simple. Also, as the conveyor belt would move all the time, it need the players making a voice all the time.

So we proposed another statement. A fugitive prisoner who runs on the cars. Cars would move but the police car is faster than the normal cars. So the prisoner should jump from current car to the next car in order to run faster than the police.

To design the prisoner, we proposed several versions. One is a strong person with muscles who could be good at running. One is a cute boy. One is a thin and tall man who looks a bit funny and tired. In the end, we chose the the third one.

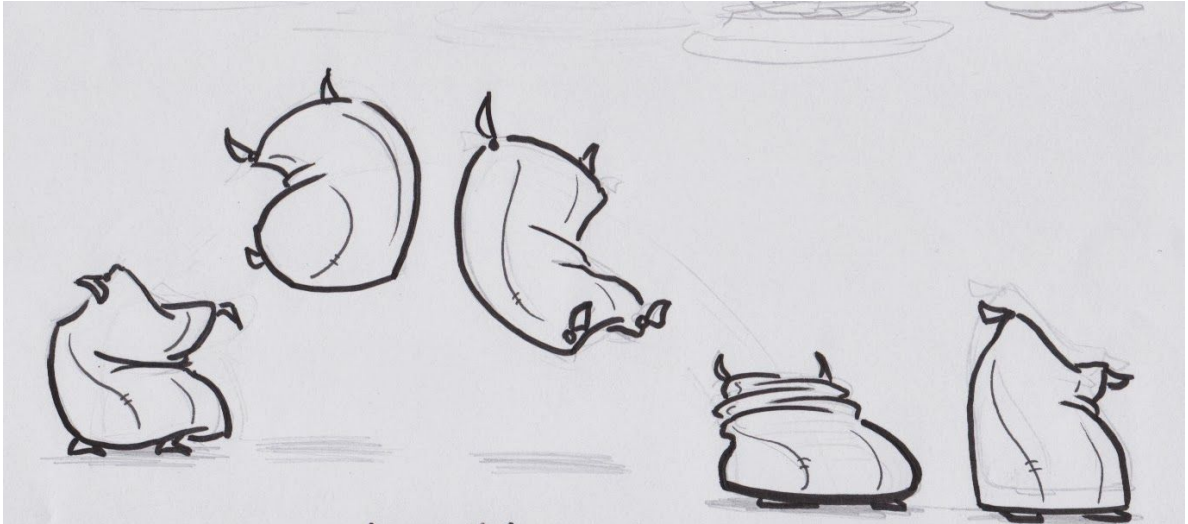


After sketching the character, we drew him by photoshop. We design the prisoner such way for several reasons. First, it could not be a positive pictorialize. So we drew a face which looks like tired and funny. And the hair is little, Second, he could not have a good body fit because of the prison time so that we gave him a thin body. Third, his action would be antics because escaping is dangerous, which he can not wear a shoes even! To sum up, we do not want to show a positive looking to the audience since the escaping prisoner is not ethical. At the same time, we hope he could be clumsy and funny.



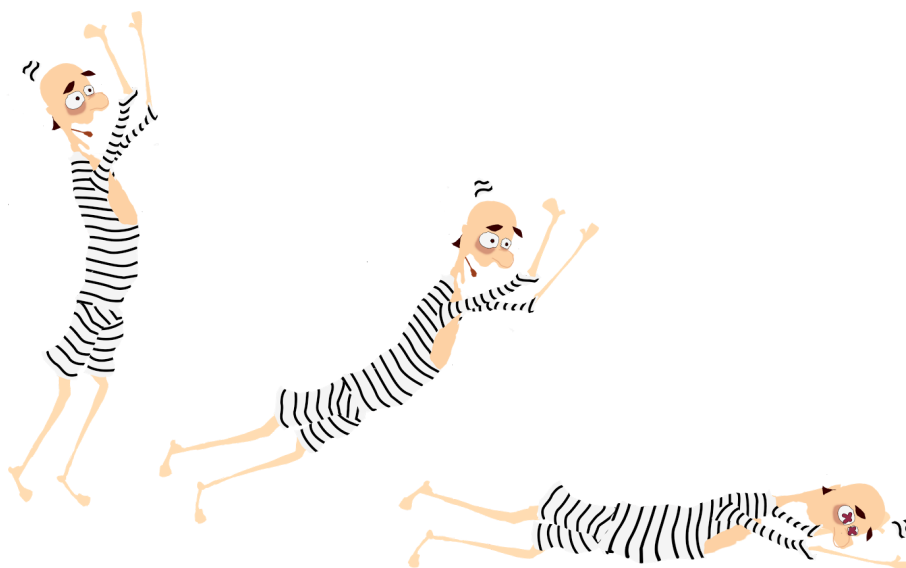
Then, we designed the action of the character. Action is very important in this game to show the running process of the role. We designed two parts of the action. One is the jump action, another is the fall action.



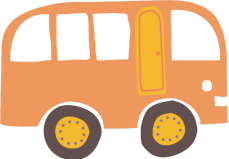
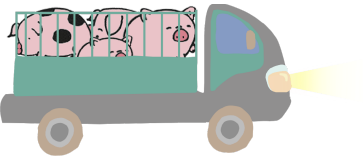





Following below is the action sequence of the character we designed.





About the cars, we designed several cars:


	a bus
	a big truck
	a taxi
	a sports car
	a SUV

	a sports car
---	--------------

Enemies and Monsters

Policeman would run after the prisoner all the time. Once the prisoner is caught by the police, the policeman would shoot the prisoner. Then game is over. Or when the prisoner drop off from the cars, he would also be caught.

When we designed the police, we decided to use police car to represent the policemen. Because it would be ridiculous if a man could run faster than a car. So we designed a police car which could run faster than any other cars which the prisoner is on. To make the game more exciting, we drew a twinkling light in blue and red to represent that the police car is coming.

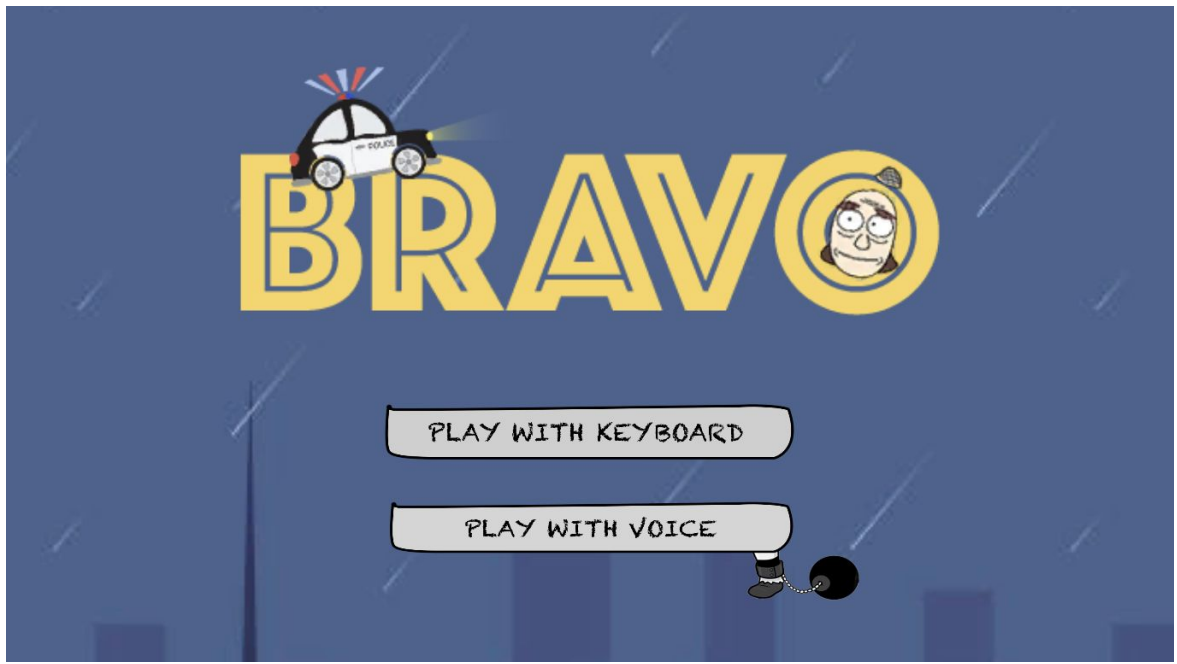
	the police car
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User Interface

Overview

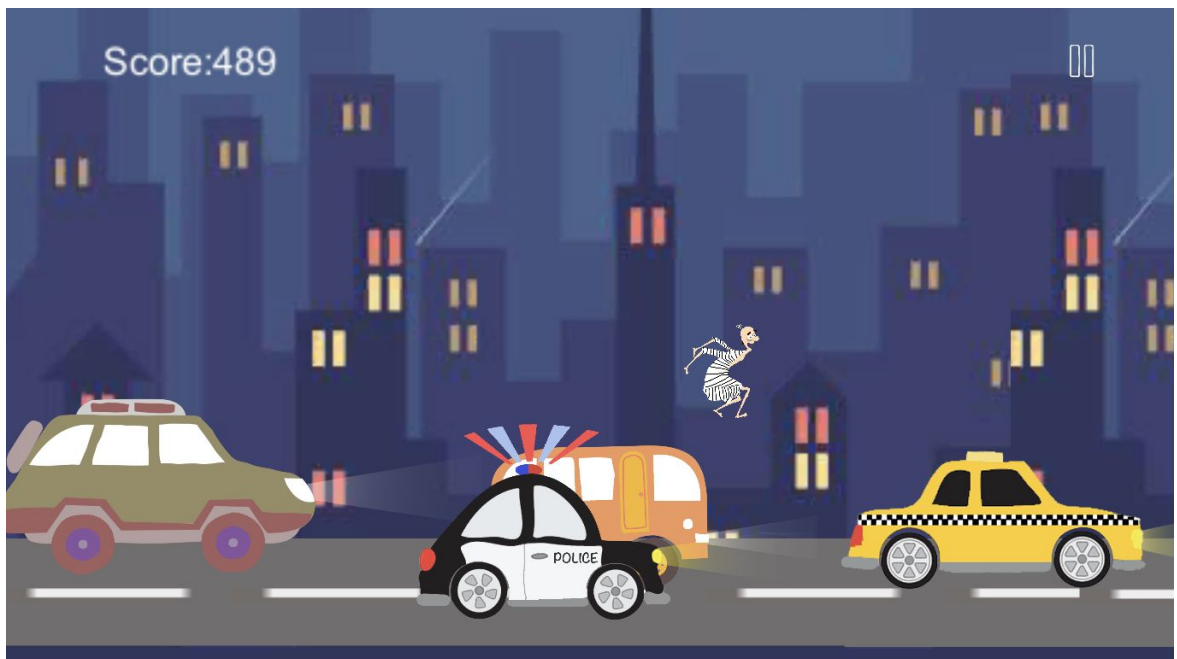
Our UI uses vector illustration style, the whole picture makes people feel comfortable to see. All UI elements came from our hand drawing, and then they were edited by photoshop. Usually, the appearance of the prisoner is malevolent and ugly. While, our prisoner is ridiculous even a little cute. In sum, the interface design is unique and well-designed.

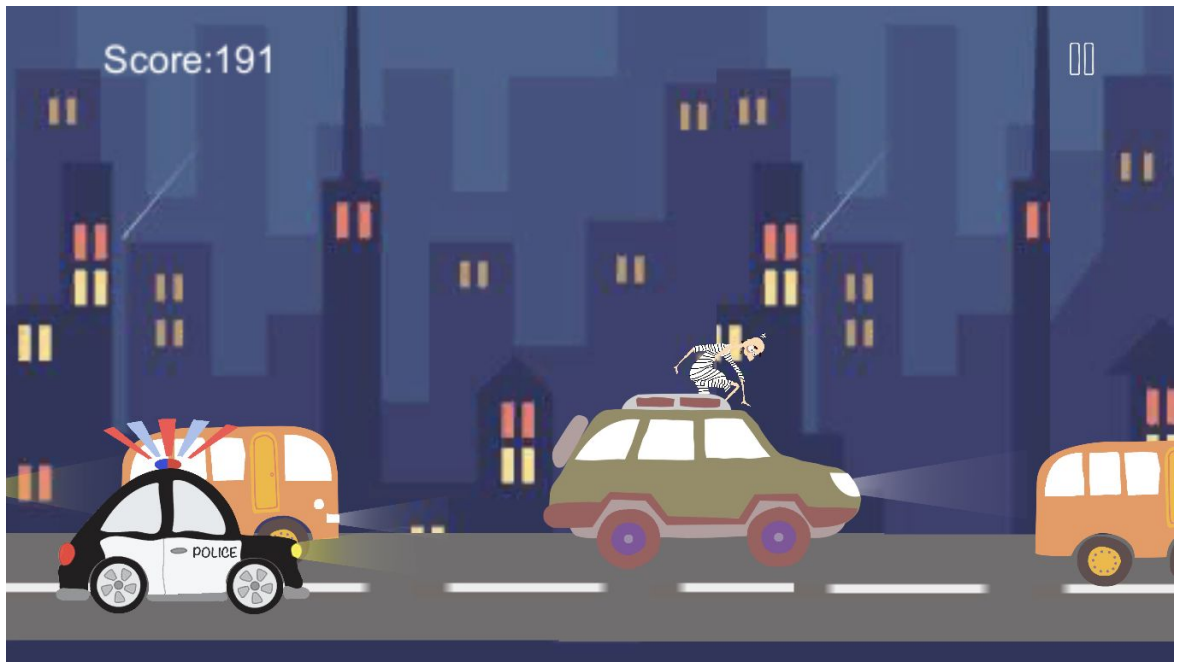
User Interface Detail #1



The first scene is game start view. In our first scene, the background is on a quiet street in a dark night. Besides, it is raining, which accommodates to the intense atmosphere. The midnight and a rainy environment offer perfect condition for a prisoner to escape. In addition, by this interface, players could choose to use the keyboard or voice to control the avatar.

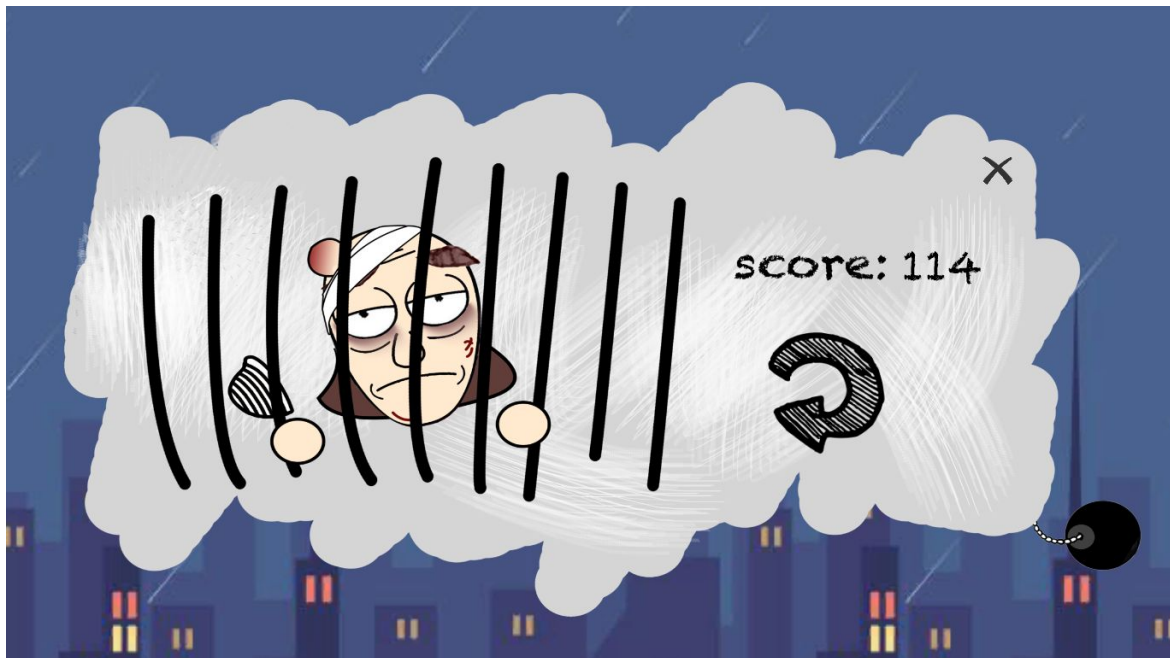
User Interface Detail #2





In the game play scene, we totally design 7 kinds of cars driving on the road, using different colors to show the function of the specific cars, such as using black and white and flashing light to represent a police car, the yellow taxi and so on.

User Interface Detail #3



This page is the failure interface. The final score will be shown on the right side, the left side shows the prisoner after being caught. He is staying in prison sadly.

Musical Scores and Sound Effects

Overview

In BRAVO, we use pleasant and suitable music to attract players. Our team paid attention to select music and we believe good music will make players feel like in the game. There are two parts of the music.

Background

Background is from MapleStory. Its style is pleasant but a little bit tension. Imagine the feeling you are going for a ride in the night while there are police chasing behind you. Our background music could make players to generate this kind of feeling.

Sound Effects

There are plenty sound effects in our game including click, jump, save energy to jump, police whistle, game over... These sound are also necessary to bring players into the game and we also took it seriously and select the most suitable sound to the gam

Extra Miscellaneous Stuff

Junk I am working on...

Crazy idea #1

- pig track
We designed the pig truck which is very cute.

Crazy idea #2

- bravo name
We use the name bravo to describe the escaping prisoner.