

INSTRUCTION BOOK

WARRIORS EXPENDITION



1. CHARACTER ABILITY
2. GAME LOGIC INTRODUCTION
3. GENERAL GRAPHIC USER INTERFACES



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1. Foreword

Since the emergence of online games, the types of online games are as easy to define as they were in the early years from simple little game to 3d large-scale scene online games. The form of network game also tends to diversity. In a short period of a few years, online games are also maturing around the world. The online games of developed countries have connected with daily life and business and has formed a set of strict rules of the industrial chain. The commercial value of online games should not be underestimated.

- **Game category:** Role-playing game, called RPG, which is the one of the most popular games at the moment. With the development of the game industry, the single RPG game type at the beginning has derived a variety of RPG game types to make game more diversified, but the whole is still based on role-playing. For satisfying the requirement of players, we design and develop the ARPG (ACT+RPG) game, which means the action RPG game, the combat system ditched the monotony of turn-based combat in favor of more exciting action style. At the same time, the RPG game interspersed with more complete storyline. Another difference from other RPG games is that we integrated a new playing method-Tower Defense, because the percentage of players who like to play Tower Defense games is close to those who like to play RPG games. Therefore, players could experience two different types of game play in the same game and it could also attract wider user group.
- **In-game goals:** For each level except Tower Defense one, the in-game goals are finishing the tasks given by NPCs as well as killing the boss and passing the level. For the Tower Defence level, the main aiming is to place warriors in different positions to protect the city from monsters.
- **Game meaning:** The RPG game could show heterogeneous subjects and backgrounds and improve the gaming experience in fictitious world, this could guarantee to experience any work in a safe atmosphere. Players could play someone that cannot play without taking any risks. This game not only provides players a good experience but also contains positive energy to attach great pedagogical meaning. It is suitable for players of all ages.
- **Game learnability:** The game is easier to operate for players, players use mouse and keyboard to control the whole game, several buttons of keyboard are easy to operate according to the usage habits of most players.
- **Copyright:** The copyright belongs to the whole members of Group 1. The cost of using this online game will be undertaken by players themselves.
- If there are any questions and coding bugs, we are glad to help you to solution every problem, please contact the following email and phone number.

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2. Character Ability

In the game, there are two camps. The first one is the righteous hero camp and the players will choose one type of heroes to play. The second one is the evil boss and enemy camp. Different heroes and enemies have own fixed initial attributions, and this part will introduce the type of property.

2.1 Hero Part

Three kinds of hero have different initial attributes, and “Lancer” and “Saber” are the synthesizing types, and “Knight” is power type. Attributes of each hero include HP, MP, ATK, armor value, move speed, EXP and level. Hero will require additional attributions through picking up the treasure boxes that is scattered all over the map and dropped by enemy. Upgrading will improve personal attributes of hero.

Table 2.1 Hero introduction

Hero	Description
	Constantine A. High Attack B. Lower HP C. High Skill Attack
	Palandin A. An equilibrium hero B. Medium Attack C. Medium HP
	Sword Man A. Low Attack B. High HP C. Recover blood by using skills

2.1.1 Health point (HP)

The health point shows the blood volume of the hero, when the hero is attacked by enemies, the health point will reduce according to the attack power of enemies. The health point is displayed on the left corner of the game interface. (See Figure 2.1)

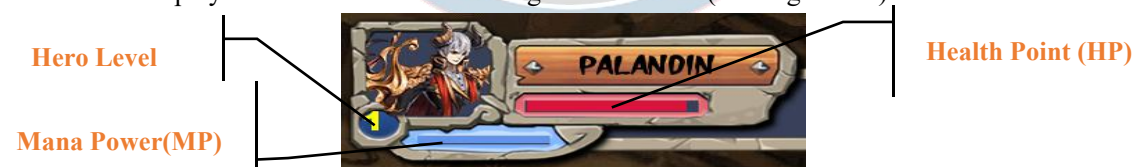


Figure 2.1 The position of HP, MP, hero level and name

2.1.2 Mana power (MP)

The mana power shows the spell power of hero, when the hero use the specific skills, the mana power will reduce according certain algorithm rules. It is displayed on the left corner of the game interface (See Figure 2.1).

2.1.3 Hero Level

The highest grade is 20 level. When hero defeat enough enemies and the empirical value attach the standard of upgrade. The HP, MP, ATK and move speed will increase to specific value depending on the **upgrade algorithm**. The higher the level, the harder it is to upgrade. Figure 2.1 shows the position of level in the game interface. The level will decide the final marking system.

2.1.4 Armor Value

The armor force is the defensive power of the hero itself. The function of armor force is to defend against part of the attack from enemies.

2.1.5 Move speed

The move speed of hero showed on the backpack interface decides the how fast hero move.

2.1.6 Attack Force (ATK)

The attack force illustrates the attack power of hero, and there are two kinds of attack power, one is common attack, another is skill attack. Skill attacks are divided into four different degrees of attack (See Figure 2.2). Different skills have different effect and the attack force are distinguishing. (For example, the 2nd skill of “Knight” is blood return)



Figure 2.2 The skill attack

2.1.7 Empirical value (EXP)

The empirical value is obtained while killing enemies, and hero acquire different experience point when defeating different types of enemies, the purpose of empirical value is to improve the level of hero. The backpack shows the empirical value of hero.

2.2 Boss and Enemy Part

The hero is antagonized by the bosses and enemies. The enemies are the boss's little soldier. There is only one boss and some different enemies in each level. Enemy attributions depend on the level of game. The attributions of enemies get higher as the level rises to enhance difficulty of the game.

Table 2.2 Boss introduction





















Boss	Description	Boss	Description
	Level 1 Hp:320 Attack:17		Level 7 Hp:400 Attack:20
	Level 3 Hp:350 Attack:19		Level 8 Hp:400 Attack:25
	Level 4 Hp:360 Attack:22		Level 9 Hp:480 Attack:28
	Level 5 Hp:380 Attack:24		Level 10 Hp:500 Attack:30

Table 2.3 Enemy introduction

Enemy	Description	Enemy	Description	Enemy	Description
	Low Attack Low Hp Short-range Attack		High Attack High Hp Long-range Attack		High Attack Low Hp Long-range Attack
	Low Attack High Hp Short-range Attack		Low Attack Low Hp Short-range Attack		Low Attack Low Hp Short-range Attack
	Low Attack High Hp Short-range Attack		High Attack High Hp Short-range Attack		High Attack Low Hp Short-range Attack
	High Attack Low Hp Short-range Attack		Low Attack High Hp Short-range Attack		High Attack Low Hp Short-range Attack

2.2.1 Health point (HP)

The health point shows the health value of enemies, the haemal strand is displayed on the parietal region of enemies (See Figure 3), enemies is attacked by hero, the health point of enemies will reduce according to the hero attack power. difficulty manifests in the numbers and health point of enemies following the levels of game.



Figure 3 The Hp of monsters



Figure 4 The Hp of boss

2.2.2 Attack Force (ATK)

The attack force illustrates the attack power of enemy, the common monsters has low attack force and the boss each level has stronger attack power.

2.2.3 Armor Value

The armor force is the defensive power of enemies itself (Usually monsters have no armor force).

3. Game Logic Introductions

In this part, we will show you the game logic introductions, including fight operations, reward, rank, game recording, equipment, money, and weather system.

3.1 RPG

There is the first playing method in our game. Here is the detailed information.

3.1.1 Operations of RPG

There are some operation instructions about movement control, attack and skill release, volume adjustment and mouse control.

- Movement Control

The arrow keys control the movement direction of the main character.

Pressing both keys can make the main character to move in oblique direction.

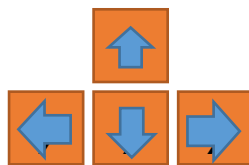


Fig 3.1 Move

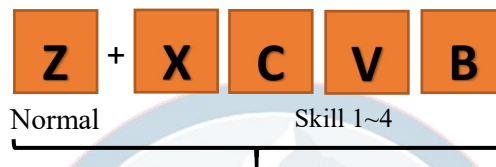


Fig 3.2 Attack



Fig 3.3 Volume

- Attack and Skill Release

Key 'Z' releases normal attack, while key 'X', 'C', 'V', 'B' can release special attack.

The attack damage of these buttons increases gradually.

- Volume Adjustment

Key '1' stops the sound; Key '2' reduces the sound; Key '3' increases the sound.

- Mouse Control

Right click the box could get equipment.

Right click the NPC could communicate with him and get clues or missions.

3.1.2 Reward System of RPG

There are several kinds of rewards during different stages.

- Defeating enemy reward

If you beaten some enemies in the game, you will be rewarded some small equipment like shoes, suits or weapons to improve your ability and obtain some experience value.

- Accomplishing missions reward

Each level has some missions, you will receive them from NPCs. If you can complete them well, NPC will reward you some money or crystal, so you can buy items in the shop.

- Passing level reward

When you achieve victory in one level, you can get rich rewards including money or crystal stones. (crystal has higher value, but with smaller possibilities)

- Random reward

You can find some treasure box in each map, there are golden, silver and iron three kinds of boxes, golden box always contains better equipment than other boxes. The possibilities of random reward become smaller with higher levels.



Fig 3.4 Weapons

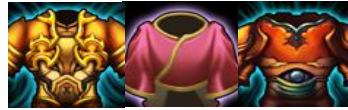


Fig 3.5 Suit



Fig 3.7 Shoes



Fig 3.8 Gems



Fig 3.9 Money & crystal

3.1.3 Weather System of RPG

To increase the realism level of the game as well as making the in-game scenes more colourful which follows the principle of **avoiding repetition**, a variety of weathers, such as raining, thunder and lightning, snowing as well as sand storm, are simulated in corresponding levels of the game. In addition, flying leaves will appear when the hero is walking under autumn trees.

Some weather such as thunder can have an impact on the hero.



Fig 3.10 Flying Leaves and raining



Fig 3.11 Lightning and raining

3.2 Tower Defense

There is the second playing method in our game. Here is the detailed information.

We hope to simulate the city defense war in the game scenario according to the tower defense. Therefore, we made two tower defense checkpoints to simulate the city defense campaign, Level 2 (Austin City) and Level 6 (Volcano City). At the same time, we use "warrior" to replace the traditional tower defense game "defense tower (buildings)", which makes the tower defense level and the game plot more closely linked.

3.2.1 Tower Defense Mechanism

The main game mechanism of tower defense is to place warriors bought by some money in different positions to organize monsters to enter the city. Warriors can't move, only can defend passively and attack enemies in front. Monsters appear in batches must to move close to warriors so that they can attack warriors, and only when the warrior in front of them is down can they move on. When monsters move to the front of the city gate, they will enter the city and damage to the city. At this time, each monster will reduce the player's HP by one. And each batch of 20 enemies will randomly appear different kinds of enemies and random positions. The time interval between two monsters is 1.5 ~ 2.5 seconds.

3.2.2 Tower Defense Elements

The tower defense is divided into five parts, which are warriors, money, monsters, bullets and healthy points.

There are five types of warriors with 4 types of long-range attack and 1 for short-range attack. Different warriors have different attributes and costs. Also, there are ten types of monsters, with different attributes. All the warriors and monsters will battle in the battle area. The table 4.1 illustrates the detail information of warriors and monsters.

Moreover, there are four types of bullets corresponding to four long-range attack warriors. Different bullets have different speed and attack volume.

When the monsters get into the city, they will disappear on the panel and the healthy points of city will decrease one point at the same time.

The money is used to set warriors. When kill a monster, the money will be rewarded by one. Besides, the money will atomically add one every five seconds.

3.2.3 Tower Defense Interface

The tower defense has several graphical user interfaces components, including city, battle area, warrior building buttons, money, HP and current batch reminder. For the city, when the monsters get into the city, they will disappear on the panel. For the battle area, all the warriors and monsters will battle here. The left three components show the money, current HP and current batch number respectively.



Fig. 3.12 Tower Defense GUI

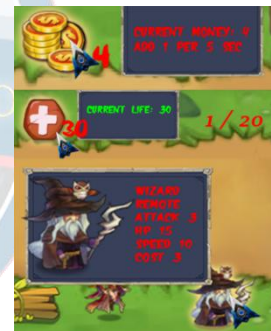


Fig. 3.13 Item Detail

3.2.4 Tower Defense Operations

The player can use the left mouse button to click the 5 building buttons at the bottom of the panel. When selected a type of warrior (click a button), the player is in the "selected state", and the corresponding money of the player will be deducted. When the player is in the "selected state", he can click the empty space of the battle area to set the warrior of the selected type.

Please note that if the position is placed a warrior, the player cannot set in this position repeatedly unless that warrior is knocked down. At the same time, the player in the "selected state" can click the right mouse button to cancel the selection and return the corresponding money.
















In addition, when the mouse enters five building buttons, money or HP buttons, the detailed information, such as warrior information or current money or blood volume, will be displayed. The effect is shown in Fig 3.13.

3.2.5 Victory Conditions and Defeat Conditions

If the player successfully destroys all enemies, and his life value is greater than 0, the tower defense level wins. After that, the player can continue to the next level.

When a total of 30 monsters enter the city, the city will be destroyed, the security task fails, and the game is over.

Table. 4.1 Actors in Tower Defense

Warriors	Description	Monsters	Description	Monsters	Description
	Cost: 1 Attack:2 Blood: 10 Long-range		<i>Evil Solider</i> Weak Low Attack		<i>Mammoth</i> High Blood Low Attack
	Cost: 3 Attack:3 Blood: 15 Long-range		<i>Evil Rider</i> Weak Low Attack		<i>Death Ghost</i> Strong High Attack
	Cost: 5 Attack:5 Blood: 15 Long-range		<i>Ghost</i> Weak Low Attack		<i>Evil Elite</i> High Blood High Attack
	Cost: 3 Attack: 1 Blood: 40 Shot-range		<i>Zombie</i> High Blood Low Attack		<i>Evil King</i> High Blood High Attack
	Cost: 7 Attack: 7 Blood: 30 Long-range		<i>Fire King</i> High Blood High Attack		<i>Dragon</i> High Blood High Attack

3.3 Rank System

After you pass every level in the game, you will be evaluated into five categories, which you can see one to five stars in the screen. The more star you gain, the better performance you were in the game, to obtain a high rank, you have to defeat more enemies.

3.4 Game Recording

The game will be automatically saved after you finish each level.

4. General Graphic User Interfaces

In this part, we will show you the main interfaces in our game.

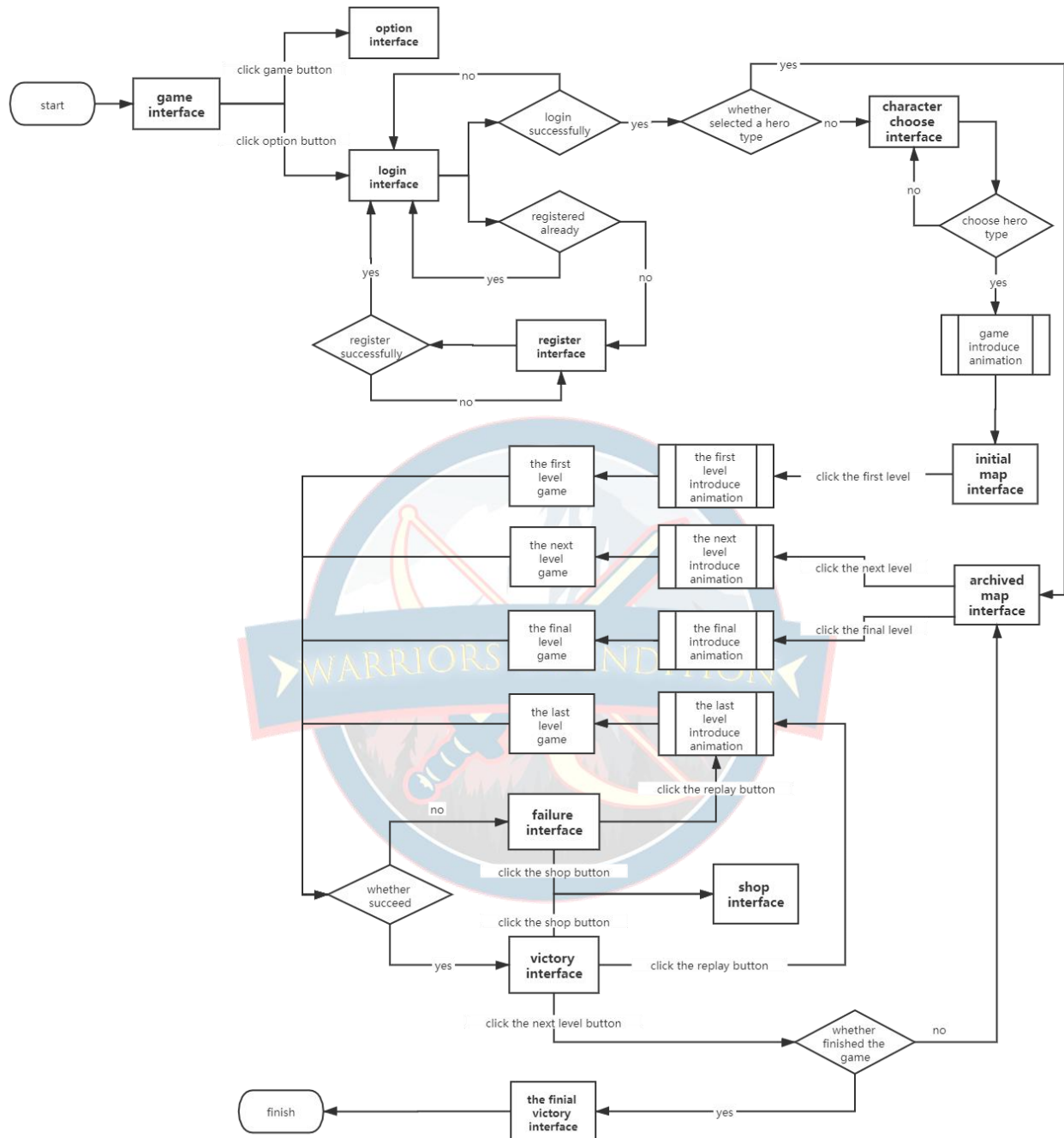


Fig. 4.1 Interface flow chat

4.1 Guided Interfaces

When players enter the game, there are some interfaces to guide them to start the game.

4.1.1 Game Interface

This is the first interface of our game that all the players will enter the game from it. In the game, all the buttons remind the player of their presence by lighting and some buttons even have pressed state with a special sound effect.



Fig 4.2 Two buttons on the game interface



Fig 4.3 Lighting button

4.1.2 Option Interface

Option interface is used to close or open the background music, and show players how to play the game and what is the theme of the game. There are four buttons on the interface, three in the center of the screen and one in the bottom right corner.

- Players can click "background music" button to close and open background music (the initial state is open). The open and close state of the horn icon is opposite to the states of music.
- The second one, "story introduce", will show an animation to introduce the game background and objectives. It will be played again after the player choose his/her hero type.
- Clicking the "how to play" button will display a popover to show how to play the game. And clicking the close button will return you to the option interface.
- The "back to menu" button will bring the player back to the game interface.

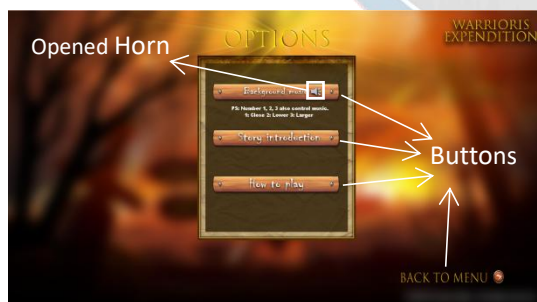


Fig 4.4 Buttons on the option interface



Fig 4.5 Closed horn

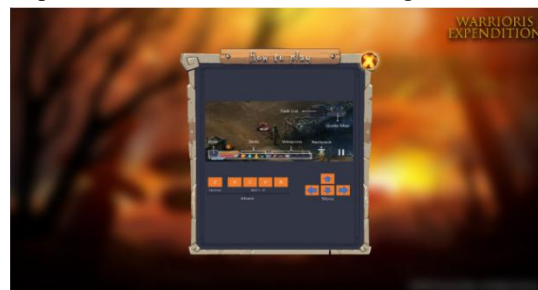


Fig 4.6 How to play

4.1.3 Login Interface

When you click the “game” button on the Game Interface, you will firstly enter the Login Interface. Here you enter your user name and password. All the registered user information are stored in the database. There are three situations in total.

- If the user name is not saved in the database, you will be prompted that *"The user doesn't exist! Hint: Check the username is right. Hint: If you haven't registered, please register first."*
- If the user name currently entered is saved in the database and the password is the same as the password in the database, you will be prompted: *"Login Successfully!"*
- If the user name currently entered is saved in the database but the password is not as same as the password in the database, you will be prompted: *"Wrong Password!"*



Fig 4.7 Login interface



Fig 4.8 Register interface

4.1.4 Register Interface

If you play the game for the first time or want to sign up for a new account, you should click the “regist” button on the Login Interface to jump to the Register Interface. Here you should enter your username and enter the password twice to confirm. There are also three situations in all.

- If the user name has saved in the database, you will be prompted: *"The user already exists!"*
- If the user name currently entered has not saved in the database and you enter the same password twice, you will be prompted that *"Register Successfully!"*
- If the user name currently entered has not saved in the database and the passwords entered do not match, you will be prompted that *"Password Mismatch! Please reenter the password!"*

4.1.5 Character Interface

This is Character selection window, here are three characters you can choose one as your warrior in the game. Left part contains three buttons you can click to check different characters. It will show the first character by default. Once click any character button, you can see basic introduction about this character on the right with audio plying. To view more detailed information about this character click the button on the right.



Fig 4.9 Character basic interface



Fig 4.10 Character detailed interface

Here you can see detailed information about the character you choose, left part is basic ability which contains HP MP and moving speed ability. Three different character has different strength in ability, you can choose by your preference. There is also a default weapon for each character, as you can see in the bottom left. The profile of the character shows in the middle and his skills shows on the right. Different character has different skills. The detail of each skill also shows on the right. Your choice on character can be based on preference, skills and ability strength. All characters can perform very well in the game, just choose anyone you like, once you diced, click continue button.

4.2 Map and Levels

Every level has a story, and these stories are coherent. Before you enter in a level, there will be a plot synopsis to help you know about the background. Then you can complete the plot in this level.

When you first enter the game, only the first level on the map are bright, which can be clicked, while other levels cannot. And every time you finished a level, the next level on the map can be lighten. There are ten levels in the game. To simulate different scenes, different weather conditions are added in suitable scene.



Fig 4.11 Story introduction



Fig 4.12 Map



Fig 4.13 Level Map

4.3 Backpack Sub-interface

There is a virtual backpack in the game holding all sorts of gems as well as showing hero information such as HP, MP and EXP. A gem is loaded into the backpack automatically after clicking a box on the ground and it will be used after being clicked.

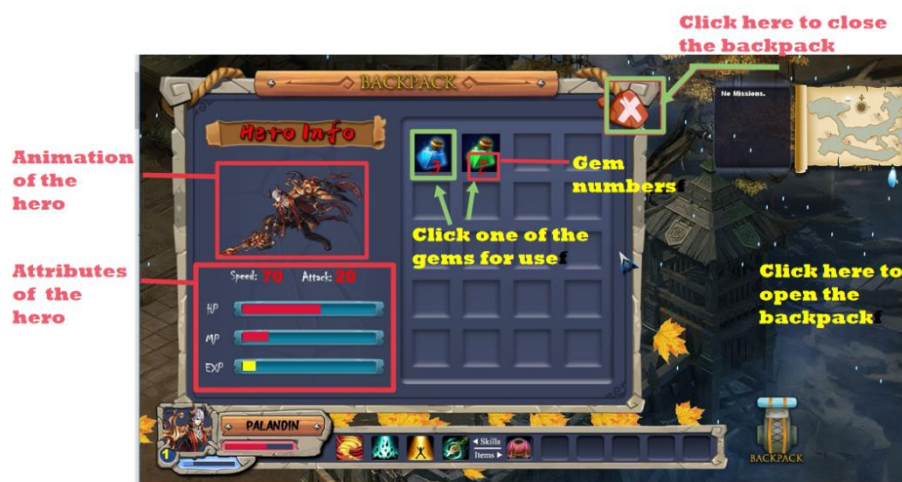


Fig 4.14 Backpack sub-interface

4.4 Shop Sub-interface

There are two sections in this layout, left is for products showing and right is for product detail showing and purchasing. In the left part, you can see different items on the shelves with price down below, if you want check details of the product, click it. There are three kinds of goods: helps you recover HP MP, and level up. In the right top corner, is the quit button. If you want to quit shopping, click it.



Fig 4.15 Two sections Fig



Fig 4.16 Click any item you want

4.5 Victory Sub-interface

If you defeat the target enemies, this window will show up. Which indicate you have finished this level. You also can see stars in the window. more stars you gain, better performance you did. There are maximum five stars you can gain, and your rank will be recorded into final evaluation.

Below the stars, there are three treasure boxes you can click. Once you click one, others are unavailable. This treasure box is a kind of reward and might contain different equipment.

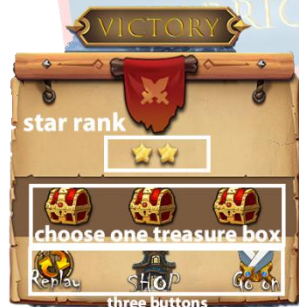


Fig 4.17 Victory sub-interface



Fig 4.18 Defeat sub-interface

4.6 Defeat Sub-interface

If your HP value decrease to 0, you will die. That follows the game over window. There are two buttons you can click, it's "shop" and "replay". You can click shop to buy some supplies to enhance your ability. That would help you perform better in this level. After shopping, you can click replay button to restart this level. Your rank in this level will be recalculated.