

Game Design Document

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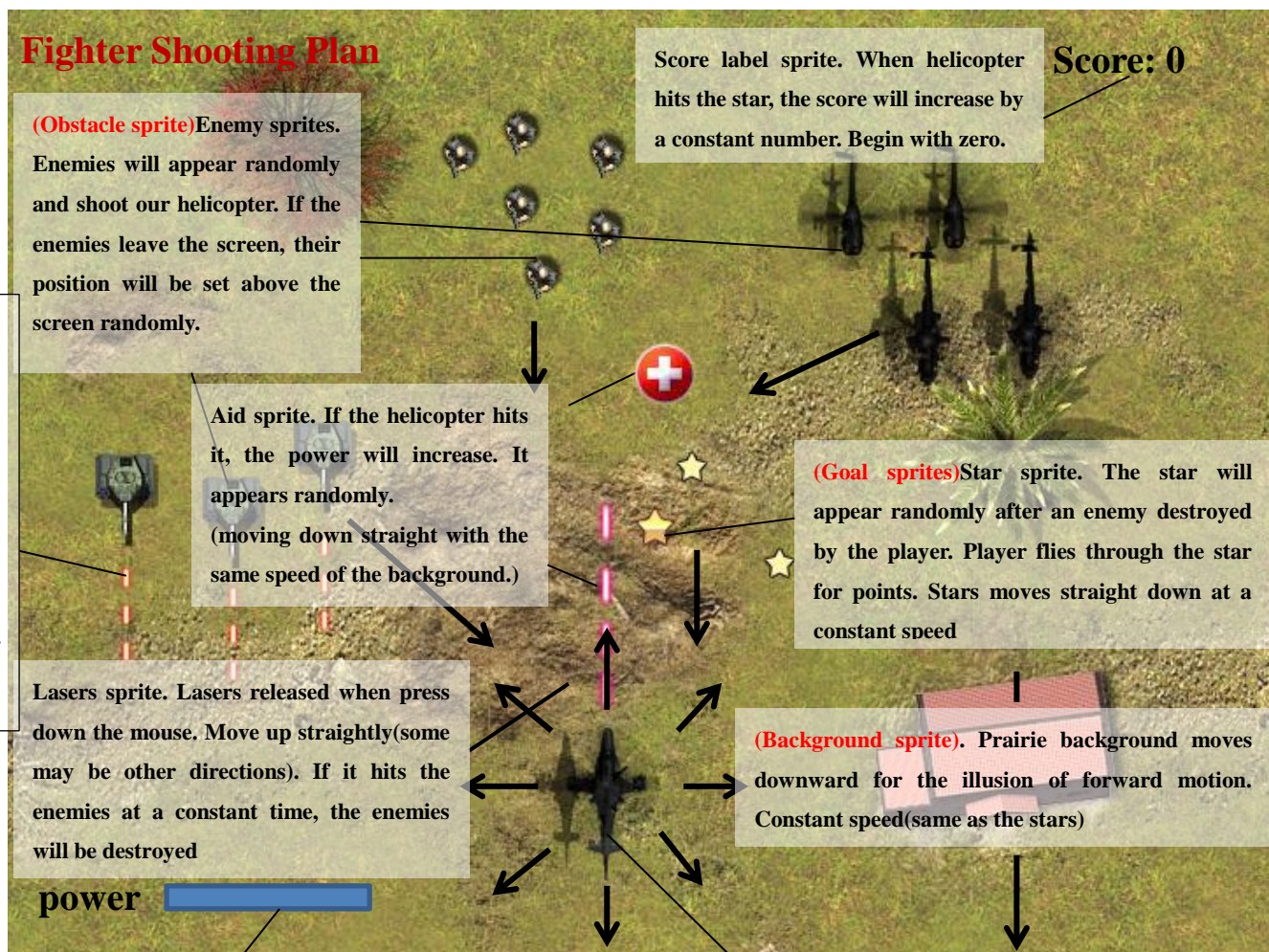
Introduction

Game Name: helicopter shoot
Programing Language: Python
Game introduction:

Game type: fighter shooting
Programing Environment: Ubuntu 11.10

It is a game that player controls a helicopter to fight against the enemies. In the game, player uses the mouse and keyboard to move the helicopter and shoot the enemies. Enemies include fighter plane, chariots, foot soldiers and so on. The enemies will shoot our helicopter too, thus, we should be careful to control the mouse to avoid being attacked and at the same time, click the mouse to shoot and destroy the enemies. When an enemy explodes, a star may appear randomly. Player should move to hit the star for points.

Game diagram



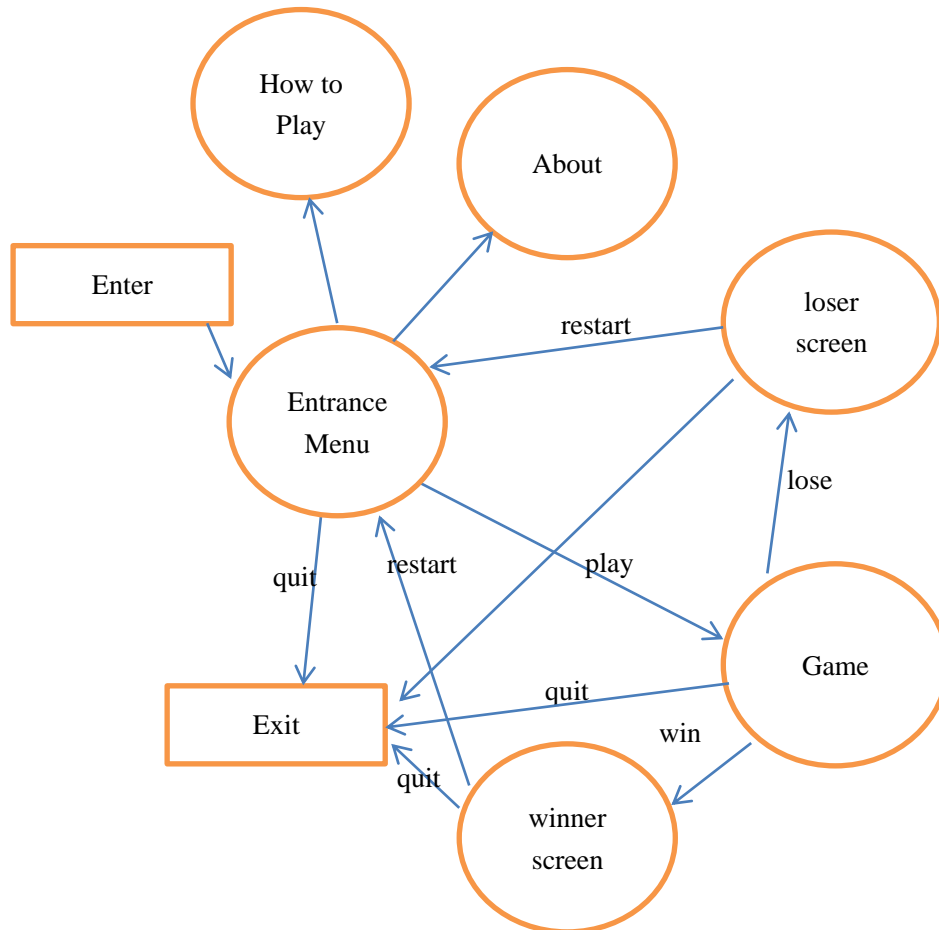
Power_rect sprites. Power of the helicopter. While the helicopter hits the enemies or is attacked by enemies' shell, the power will be reduced and the rectangle's width will become smaller.

(Player sprite) Helicopter sprite. Mouse controls helicopter's motion. The helicopter can move everywhere in the screen, which means that it can move at every direction.

sound effects:

- 1.background music,
- 2.plane and chariots explosion sound
- 3.soldiers' cry sound
- 4.sound of releasing the lasers
- 5.star collision
6. sound of releasing shells by the enemies

State/transition diagram



Milestone plan

Basic helicopter sprite :

create the helicopter sprite, including:

1. keep propeller rotating
2. move with the mouse

laser sprite (release by helicopter player controls) and sound effect:

1. released by the helicopter while the mouse pressed down
2. releasing number is infinite
3. play sound while released

enemy sprites:

a. fighter plane

1. appear randomly
2. keep propeller rotating
3. move bias
4. explode while being destroyed

b. foot soldier:

1. appear randomly
2. moving down straight
3. dying action

c. chariots:

1. appear randomly
2. moving down straight
3. explode while being destroyed

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shell sprite (released by enemy) and sound effect:

1. Enemies shooting toward the mouse
2. can be produced infinitely
3. sound played while released

star sprite:

appear randomly after an explosion of enemies

aid sprite:

appear randomly

collisions:

1. collision between star and helicopter
2. collision between aid and helicopter
3. collision between enemy and helicopter
4. collision between shell and helicopter
5. collision between laser and enemy

Scrolling the Prairie background:

keep the Prairie background moving straight down

Multiple enemies:

add the number of enemies

Scorekeeping:

1. score increasing animation
2. while collision between star and helicopter happens, increase the score.

Intro screen, Winer screen and Loser screen:

Create the three screen with a picture and buttons

Data plan

The data structure will be used are as follows:

- 1.Object of helicopter sprite class
- 2.Object of fighter plane sprite class
- 3.Object of foot soldier sprite class
- 4.Object of chariots sprite class
- 5.List of objects of lasers (declared in helicopter object)
- 6.List of objects of shells (declared in enemy objects)
- 7.Object of aid sprite class
- 8.Object of star calss
- 9.Object of score label class
- 10.Object fo power_rect class
- 11.List of images (for making the animation)