

UML and UI Design Document

Become Pac-Man

version: 1

Group F8

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1 UML DESIGN

1.1 User Management

1.1.1 Structural Diagram

class diagram

1.1.2 UMLs

use-case diagram

sequence diagram

1.1.3 Component Functionality

This component is

1.1.4 Major Procedure and Functions

Signup: This function is to create accounts and save them into database.

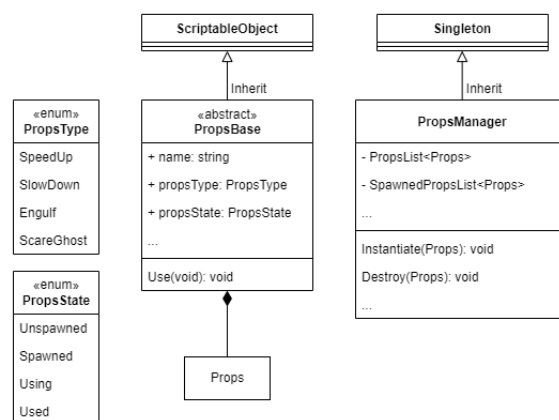
Login: This function is to verify account information so that users with records are allowed to retrieve past records in the game.

Verification: This function is to verify the validity of user id and password.

1.2 Props

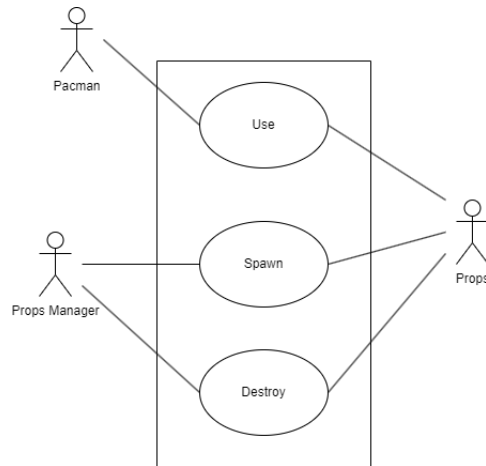
1.2.1 Structural Diagram

class diagram

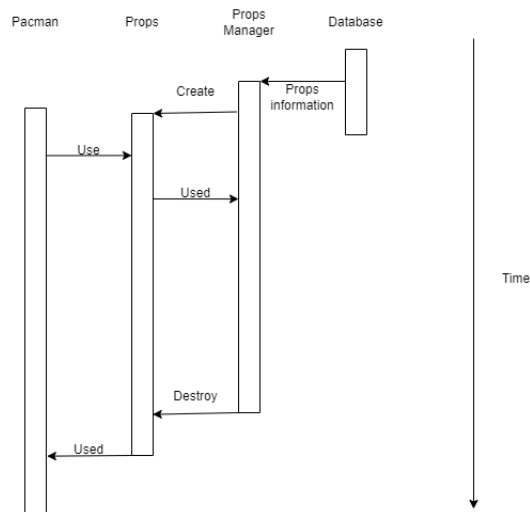


1.2.2 UMLs

use-case diagram



sequence diagram



1.2.3 Component Functionality

The props class is to provide the bases for game objects, such as pellets in the maze for Pacman to achieve scores, or other props that will enhance in-game experience.

The PropsBase component is to provide an abstract template for each prop. And PropsManager is to announce control sequence to each props.

1.2.4 Major Procedure and Functions

Use(void): The Use function is to obtain the action of using the prop, by destroying the prop from the maze.

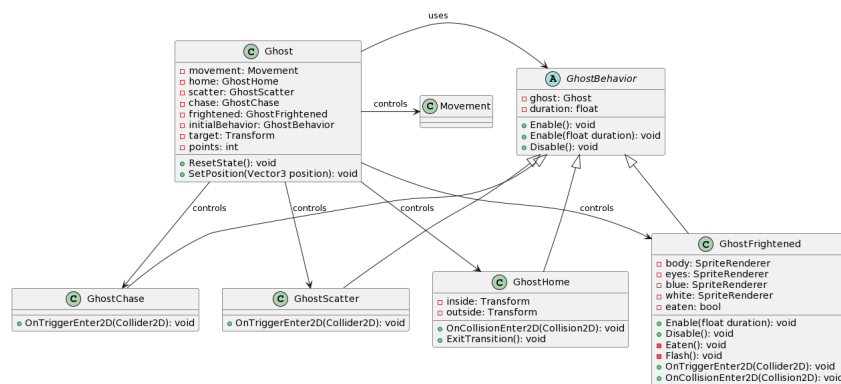
Instantiate(Props): The instantiate function is to create the props for each game.

Destroy(Props): The destroy function is to destroy the prop from the maze for each game.

1.3 Ghost

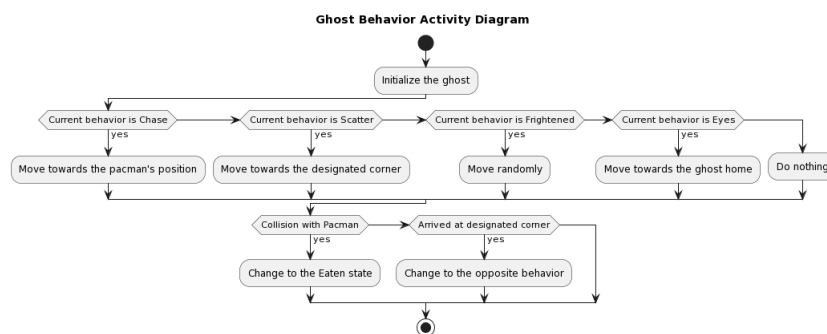
1.3.1 Structural Diagram

class diagram

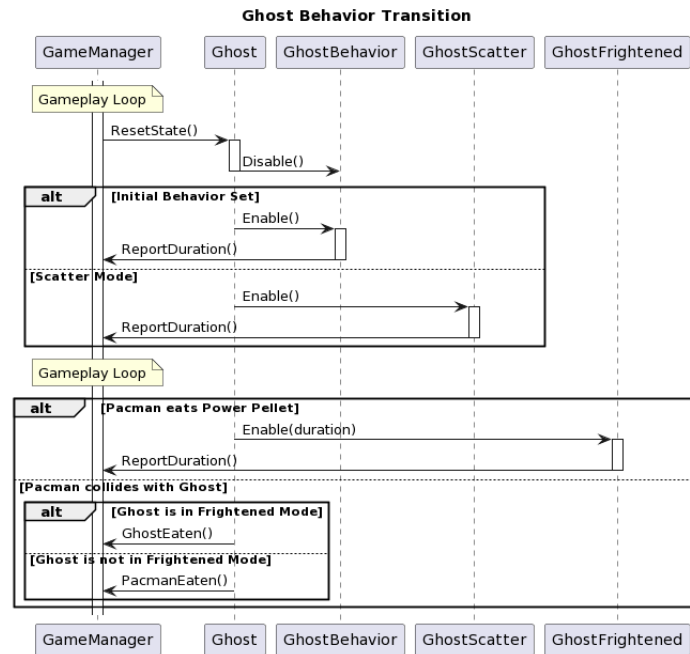


1.3.2 UMLs

activity diagram



sequence diagram



1.3.3 Component Functionality

The Ghost class is to indicate movement for each of all ghosts in the game. It manipulate with ghost behaviour and different status of a ghost.

It consists of a ghost element from GameManager to control the action of the ghost. Ghost behaviour will be uses to indicate the status of the ghost. GhostChase, GhostScatter, GhostHome and GhostFrightened are 4 status of ghost interacting with GhostBehaviour.

1.3.4 Major Procedure and Functions

Enable() and Disable(): The two functions set in Ghost Behaviour provide the indication of activation of a ghost, i.e. whether the ghost is working.

ResetState(): This function is to reset the status of a ghost to its default status.

ExitTransition(): This function is to end the transition procedure.

2 UI DESIGN

2.1 Login/Sign-up page

2.1.1 Description of view

2.1.2 Screen Image

2.1.3 Objects and actions

2.2 Title Screen

2.2.1 Description of view

2.2.2 Screen Image

2.2.3 Objects and actions

2.3 Shop UI

2.3.1 Description of view

2.3.2 Screen Image

2.3.3 Objects and actions

2.4 Setting UI

2.4.1 Description of view

2.4.2 Screen Image

2.4.3 Objects and actions

2.5 Main Game

2.5.1 Description of view

2.5.2 Screen Image

2.5.3 Objects and actions

2.6 Record page

2.6.1 Description of view

2.6.2 Screen Image

2.6.3 Objects and actions