Id: Use Case 1

Actors: Player

Preconditions: Application installed

Flow of events: 1)Player double clicks on the space invaders program, 2)The system initialises, 3)<include> cycle use case, 4)Use case ends

Post Conditions: The introduction screen is displayed

Id: Use Case 2

Actors: Player

Preconditions: Application launched

Flow of events: 1)System displays the introduction screen, 2)Use case ends

Post conditions: The user is allowed to start a new game

Id: Use Case 3

Actors: Player

Preconditions: Introduction screen is being displayed

Flow of events: 1)User presses begin game button, 2)The system displays the game screen, 3)<include>Cycle use case, 4)Use case ends

Post Conditions: The user is playing a new game.

Id: Use Case 4

Actors: Player

Preconditions: Game is executing

Flow of events: 1)User press the left or right arrow key, 2)The system moves the ship and displays the ship in its new position, 3)Use case ends

Post conditions: The ships position has changed

Id: Use Case 5

Actors: Player

Preconditions: Game is executing and no other firing is in progress

Flow of events: 1)User presses either the firing key, 2)The system creates a new upward moving missile at the ships location, 3)Use case ends

Post conditions: A player firing is in progress

Id: 6

Actors: Time

Precondition: The game is executing

Flow of events: 1)While ship and aliens are present, 2)<include> move aliens use case, 3) <include> move missiles use case, 4) <include> drop bomb use case, 5) <include> move spaceship use case, 6) <include> check collisions use case, 7)Use case ends

Post conditions:

Id: 7

Actors: Time

Precondition: Game cycle is executing

Flow of events: 1)<include> player firing collision use case, 2) <include> bomb collision use case, 3) <include> alien move use case, 4) <include> check defender with game area 5) Check spacecraft with game area, 6)Use case ends2)<include> move aliens use case, 3) <include> move missiles use case, 4) <include> drop bomb use case, 5) <include> move spaceship use case, 6) <include> check collisions use case, 7)Use case ends

Post conditions:

Id: 8

Actors: Time

Precondition: Game cycle is executing and player firing. The bullet has changed position

Flow of events: 1) Check bullet collision with bomb dropped, 2)check bullet collision with alien, 3) check bullet collision with base, 4)check bullet collision with spacecraft, 5)check bullet collision with game area, 6)end use case

Post conditions:

Id: 9

Actors: Time

Precondition: An alien has been destroyed

Flow of events: 1)add point to total, 2)remove alien, 3)if all aliens are destroyed then <extend to include> next alien level screen, 4)Use case ends

Post conditions:

Id: 10

Actors: Time

Precondition: Alien has changed position

Flow of events: 1)Check collision with defender, 2)Check collision with base, 3) Check collision with game area, 4)Use case ends

Post conditions:

Id: 11

Actors: Time

Precondition: Game cycle is executing and at least one bomb is present and changed position

Flow of events: 1) For each bomb being dropped – Check collision with defender, if collision <extend> to include end screen, check collision with base and check bomb collision with screen boundaries, 2)End use case

Post conditions:

Id: 12

Actors: Time

Precondition: A ship is not present or all aliens destroyed

Flow of events: 1)If the player has lost ship – If the player has another ship then <include next ship use case else if there is no next ship <include> game over use case

Post conditions:

Id: 13

Actors: Time

Precondition: A game cycle is executing

Flow of events: 1)System will pause the cycle by not allowing any game input, 2)system will clear the screen, 3)System will create a new screen with lower positioned aliens, 4)System will resume the cycle by allowing game input, 5)Use case ends

Post conditions:

Id: 14

Actors: Time

Precondition:

Flow of events: 1)If the score for the current game is > minimal score in the history list <include> Record high score use case, 3)Use case ends

Post conditions: