Requirements Space Invaders

group 23

- The game shall show a main menu when it starts.
- The main menu shall have the following options: Play game / High Scores / Quit.
- The option "Play game" shall start the game.
- The option "High Scores" shall display the high score menu.
- The high score menu displays a scoreboard that shows the 10 highest scores.
- The option "Quit game" shall exit and close the game.

- When the game is started it shall show a bunch of aliens and a spaceship at the bottom middle.
- 30 aliens shall appear at the top in rows of 10 at the start of the game.
- The aliens shall shoot downwards.
- Only one alien shall shoot at the same time.
- The aliens shall shoot automatically and randomly.
- The aliens shall move between the left and right border.
- The aliens shall descend upon reaching a border.
- The game shall end when an alien reaches the bottom.

- The game shall have four different types of aliens.
- One type shall shoot bullets that move at a low speed, is killed with 1 spaceship bullet and is worth 10 points.
- Another type shall shoot bullets that move at a medium speed, is killed with 2 bullets and is worth 20 points.
- The third type shall shoot bullets that move at a high speed, is killed with 3 bullets and is worth 30 points.
- The fourth type is the Boss alien.
- Boss alien shall have a higher score than the rest of the aliens.
- Boss alien shall disappear after being hit multiple times by spaceship bullets.
- Boss alien shall go from left to right and down if it hits a border.
- Boss alien shall be the only alien in the screen for that level.
- Boss alien shall appear every five levels.
- Boss alien shall be able to shoot downwards.
- Boss alien shall be able to shoot different types of bullets.
- Boss alien shall be able to shoot multiple bullets at the same time.

- The spaceship shall only be able to move to the left or right.
- The player shall control the actions of the spaceship manually.
- The spaceship shall be able shoot upwards to hit the aliens.
- The alien disappears when it is hit.
- The player shall earn points for killing an alien.
- The player shall have multiple lives.
- The player shall lose a life when the spaceship is hit.
- The game shall end when the player has no lives left.

- The game shall have multiple levels.
- The game shall advance to the next level when there are no aliens left.
- The game shall end when there are no more levels left.
- When the game end the high scores menu will be shown.
- Each level shall increase the difficulty by adding more aliens, less barriers or spawning more difficult aliens.
- The game shall have a transition screen before each new level.
- The transition screen shall show information about the level that it is about to start (such as level number and/or type of aliens).

- The game shall have protection barriers.
- Protection barriers shall block enemy bullets.
- Protection barriers shall be located between the spaceship and the aliens.
- Every time the protection barrier is hit, a piece of it disappears.

Logging:
- When the player starts the game, then the start up is logged.
- When the game is ended, then the game being ended is logged.
- When the spaceship is created, then the create is logged.
- When the spaceship shoots a bullet, then the shoot is logged.
- When the spaceship is hit, then the hit and the number lives left is logged.
- When the spaceship moves left/right, then the movement is logged.
- When an alien shoots, then the create is logged.
- When the spaceship shoots, then the create is logged.
- When the bullet has reached the top of the screen, then the bullet removal is logged.
- When an alien is created, then the create is logged.
- When an alien shoots a bullet, then the shoot is logged.
- When an alien is hit, then the hit is logged.
- When an alien hits the left/right side, then the movement down is logged.
- When a barrier is created, then the create is logged.
- When a barrier is hit, then the hit is logged.