Space Shooter Video Game

For my final project I plan on making a video game using J Frame or Swing to help develop the game. I plan on making a space shooter type game where enemy projectiles fly onto the screen to hinder the player's progression through the game. There will be a score displayed on the screen to show the player's progress. The game will become increasingly harder as the player continues. The program will start with allowing the player to select a difficulty level of easy, medium or hard. Selecting one of these will alter values to determine the starting difficulty of the game. The difficulty of the game is increased through the number of projectile enemies and the speed they move towards the player at. I plan on having the enemies appearing in waves against the player, for example there will be only five enemies spawned onto the screen at a time. The enemies will spawn in random locations off screen and move towards the player, so the player would not be able to predict the location they will come from. Once they are destroyed by the player or fly off the screen another wave of enemies will spawn. The space ship or player object will be displayed and receive input from a player or user. It will be displayed on the bottom part of the screen, the player can move the ship using inputs of the left and right arrow keys and fire projectiles from the ship using the space bar. Once I get the main parts of the game working, like player movement, firing and creating projectiles, collision detection between projectiles and enemies, enemy spawners and the score, I plan on creating a final enemy for the player to defeat. Since I am interested in video game design and development, a project like this would keep me motivated to make a finished project that will push me to learn more about java and what I need to complete this project.