High Level Description

1. **Package GUI**: This package contains all of the relevant classes related to UI such as the menus to be displayed to the screen as well as the relevant methods used when interacting with all the other packages.

   a. Class MainWindow: main JFrame which will be displayed to the screen, contains all the menus and the logic for switching between them.

   b. Class IntroPanel: contains introductory panel that displays when user first launches the program. Interacts with Game class.

   c. Class LoginPanelOne: contains the panel in which a user can login as player one. Interacts with Login class.

   d. Class LoginPanelTwo: contains the panel in which a user can login as player two. Interacts with Login class.

   e. Class CreateAccountPanel: contains the panel in which a user can create a new account. Interacts with CreateAccount class.

   f. Class MainPanel: contains the main menu with access to GamePanel, HelpPanel, StatsPanel and LogoutPanel as well as exiting the program entirely.

   g. Class HelpPanel: contains the panel that displays information that will help new players familiarize themselves with the game.

   h. Class StatsPanel: contains the panel that displays the versus records and top ten records. Interacts with Stats class.

   i. Class GamePanel: contains the menu which will display all the game options to the players and starts a new game round using the chosen settings.

   j. Class Sound: contains all the Clips objects which will be used in the program as well as the relevant methods for buffering, looping, and starting and stopping playback.

2. **Package Gameplay**: Gameplay is in charge of the main gameplay aspects of the game such as the graphics, the player controls and map. This package also contains the classes that display the game to the screen.

   a. Class Game: contains the main game loop and displays the game window.

   b. Class Keyboard: contains methods which handle user input.

   c. Class Level: loads maps from a specified folder and stores the selected map in memory. Displays the map and checks for collisions.

   d. Class Pause: contains the pause logic and displays a resume button.

   e. Class Player: contains parameters related to players, mainly position, color, direction, speed; and helper methods related to player logic

f. Class Score: used to store the score for the current match

g. Class Tuple: store integers for color and glow of a player.

3. **Package Accounts**: This package includes the Login Management System separated into two different classes, as well as a User object and a Statistics object, which allow us to keep usernames and stats in memory to quickly display them to the screen and interact with the CRUD package.

   a. Class CreateAccount: contains all the methods which allow us to create a new account within the system.

   b. Class Login: contains all the methods which are used to verify login and creates an object that ensures the coordination of the system.

   c. Class Stats: provides methos which are used to keep track of records and quickly display them.

   d. Class User: creates a user object which is used to contain in memory all the relevant info for a logged in player.

4. **Package CRUD**: As the name implies, this package is in charge of Create, Read, Update and Delete from our CSV files. This package allows for easier management of creating accounts, login system and keeping track of stats.

   a. Class CSVHandler: provides all the methods for reading and writing into csv file for Login and CreateAccount classes.

   b. Class StatsFileSystem: provides several key methods for reading and writing from the csv file which contains the stats info.