(Default Package)

*Ass7Game - The main class, runs the game. Creates the GUI, keyboard sensor etc.

(animation Package)

(Interface) *Animation – The interface of all animations, implemented in all animations.

*AnimationRunner – Runs the game animation.

*CloseGameTask – Task used to close the game.

*HighScoresAnimation – Animates the HighScores of the game.

(Interface) *HitListener

       Both of themes are used to remove objects and balls from the game after hitting an alien.

(Interface) *HitNotifier

*KeyPressStoppableAnimation – Used to stop animations with a key press.

(Interface) *Menu - The menu interface is used when making a menu and animating it.

*MenuAnimation – Used to animate the menu.

*ShowHighScoresTask – Used to show the highscores.

*StartGameTask – Used to start the game.

(Interface) *Task – Used to be able to use tasks in the menu to separate code functionality.

(geometry Package)

*Line – Used to get collision points and trajectories.

*Point – Used to get points for lines and geometric shapes.

*Rectangle – Used to create blocks and aliens.

(mechanics Package)

*Alien – Used to create and move the aliens in the level.

*AlienBullets – Used to create and shoot alien bullets in the level.

*Bullet – Used to create the bullet the player ship shoots.

(Interface) *Collidable – Used on objects than can collide, to set them as collidable.

*CollisionInfo – Used to get collision information.

*GameEnvironment - Used to create game environment, get collision trajectories.

*HighScoresTable – Used to create, read and write from a highscores table.

*ScoreInfo – Used to keep score information.

*Shields – Used to create the shields in the game.

*Ship – Used to create the player controlled ship.

(Interface) *Sprite – Used by all sprites to animate themselves.

*SpriteCollection – Used to collect game sprites for quick animation.

*Velocity – Used to create bullet velocities.

(play Package)

*AlienRemover – Removes aliens when hit.

*BulletRemover – Removes bullets when they hit.

*CountdownAnimation – Animates the countdown.

*Counter – Used to count various things. Like lives, scores etc.

*EndScreen – Used to animate the endscreen.

*GameFlow – Used to run the game.

*GameLevel – Used to initialize and re-initialize the level.

*LevelCreator – Creates the level, background, aliens etc.

(Interface) *LevelInformation – Used by the level creator.

*LivesIndicator – Indicates the lives of the player.

*NameIndicator – Indicates the name of the level.

*PauseScreen – Used to animate the pause screen.

*ScoreIndicator – Indicates the score of the player.

*ScoreTrackingListener – Listener used to track the score.

Special Information (As requested)

A) Alien Formation: The aliens are blocks with the Space Invader image drawn on them, I created a move function in the blocks (now Alien) class that moves the aliens to the right, when the aliens hit the side of the screen (Checked with another function), the aliens go down and change direction only to repeat the process until destroyed or a player loss.

B) The Shields: The shields are a replica of the blocks class from previous assignments, slightly modified to be separate, function the same and is initialized with the level at the beginning of the game, separate from the reset of the blocks to remain when a player loses a life.

C) Shots by Aliens: Shots by aliens are created in the AlienBullets class, the class receives the aliens, finds the lowest row of aliens, and randomly selects an alien from there, after which, a bullet is created and shot down from the location of that alien. If the bullet hits a Shield it's destroyed, and if it hits the player, the player loses a life and all the aliens reset.

D) Shots by Player: Ball class from previous assignments modified to the Bullet class. The bullet class is activated by the player pressing space, implemented inside the Ship class. When the space key is pressed, a bullet going straight up is created from the middle of the ship, if it hits an alien the alien is removed from the game and so is the bullet. If the bullet missed, it leaves the screen never to be seen again; Some say it still roams these lands, searching for prey.