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**Java 2D Game Report – Programming a 2D Java Game w/ RyiSnow**

**Video 1 – The Mechanism of 2D Games**

The first video resulted in the creation of two classes: Main and GamePanel. The video focused on the mechanism of 2D games, namely how windows are displayed using JFrame and Java Swing, how to create a game thread which can represent the concept of time and keep the game running smoothly until it is closed, and how to prepare for programming the run method. The concepts introduced in the video include window settings, game panel settings, and tile sizes, each building upon each other to create a working game. To start, the Main class creates a JFrame window that has its background color set to black, its visibility set to true, its location set to center, and its size packed to follow the dimensions of the GamePanel added to the window. The window’s title is set to “2D Adventure” and resizing is set to false to prevent the window from being resized while the game is being played. Later in the video, the GamePanel class is created, which holds information related to the dimensions of the game window and the future dimensions of tiles which will determine the official size of sprites. Since the pixel sizes of screens are large in newer computers, the tile size of sprites, which is originally 16x16 pixels, is increased by a scale of three. This ensures that the sprite displayed on the screen is larger than it really is. The class also contains a run loop method implemented from the JPanel class that will eventually run the game, allowing the player to continue to play until the game window is closed.

**Video 2 – Game Loop and Key Input**