The Idea

We will make a 2D platformer game, like Mario or Hollow Knight. The aim will be to reach the end of the level without dying. Along the way the player will face enemies that will try to stop the player, as well as parkour to reach the next stage.

The game will be for PC only and written in Java. Java will be ideal for this as most PCs use Java and it has an easy to use graphics library.

Interaction with the player

The player will be able to interact with the game with 2 main methods:

* Playing the game, this involves the movement controls, the game window and the GUI on screen.
* Through menus, these involve the start, pause and options menu.

Having a simple interface means that it will be easy for any player to be able to navigate the menus game knowing exactly how to edit a specific setting or getting back to playing the game.

Start menu concept:

A picture containing diagram

Description automatically generated

The play button leads to a menu selector where you select which level to play, levels unlock after finishing the previous level (the first level is a tutorial). The Options menu will have things like the video and audio settings.

Other Stuff

This is a basic flow chart outlining the barebones of the game loop and handeEvents subprocess. The gameloop will be run when playing a level. The mainloop will call this when a level is clicked on in the menu selector.

Diagram

Description automatically generated

Requirements

System Requirements:

* Java installed on any operating system (Swing is platform independent)
* Keyboard
* Mouse

User requirements:

* The menus must be easy to navigate.
* The controls must be simple enough that anyone can use them.
* Must have enough gameplay to keep the user entertained.
* Should be able to have the window full screen or windowed.