

# Project Flip Jump

## Group 17

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## **2 System Overview**

### **2.2 Overall Architecture Description**

#### **2.2.1 Graphics manager**

This object only handles the graphical part and do not affect any other part of the system. It will receive information from the Game logic object for processing. The processed information is then sent to the graphics card which then draws it on the display.

#### **2.2.2 Audio manager**

This object only handles the audio and do not affect any other part of the system. The audio manager will receive information from the Game logic object for processing and then send the result to the sound card.

#### **2.2.3 Game logic**

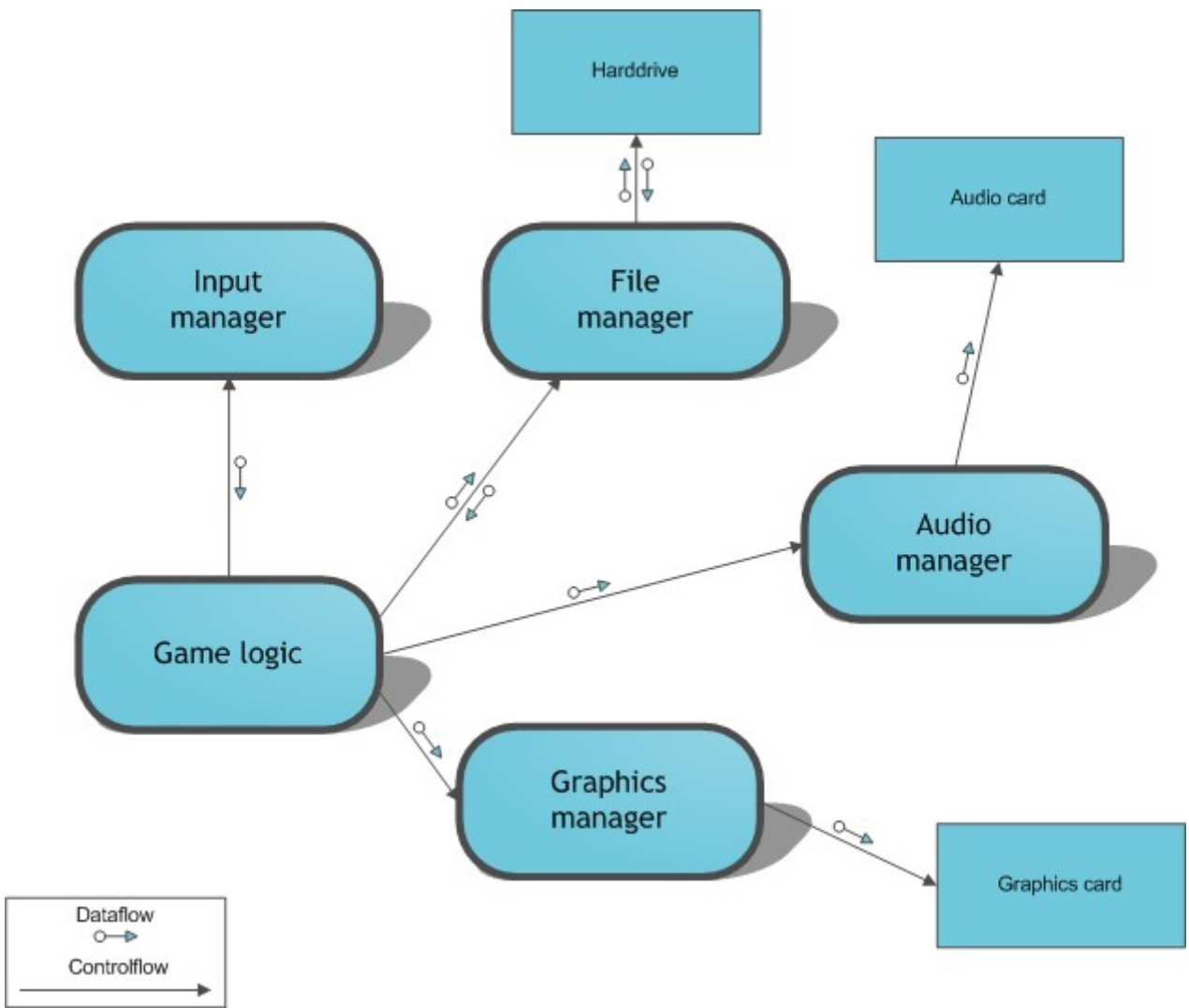
This object controls everything. This will contain the main loop of events. The game logic will control everything from the game physics and game rules to what is to be heard and seen (audio and graphics). It will receive information from the Input object about what the user is up to, and acts accordingly. The game logic also sends and receives information to and from the File system object.

#### **2.2.4 Input manager**

The input manager needs to be started by the Game logic object to be able to listen to input. This object interprets the input from the keyboard and sends the information to the Game logic object.

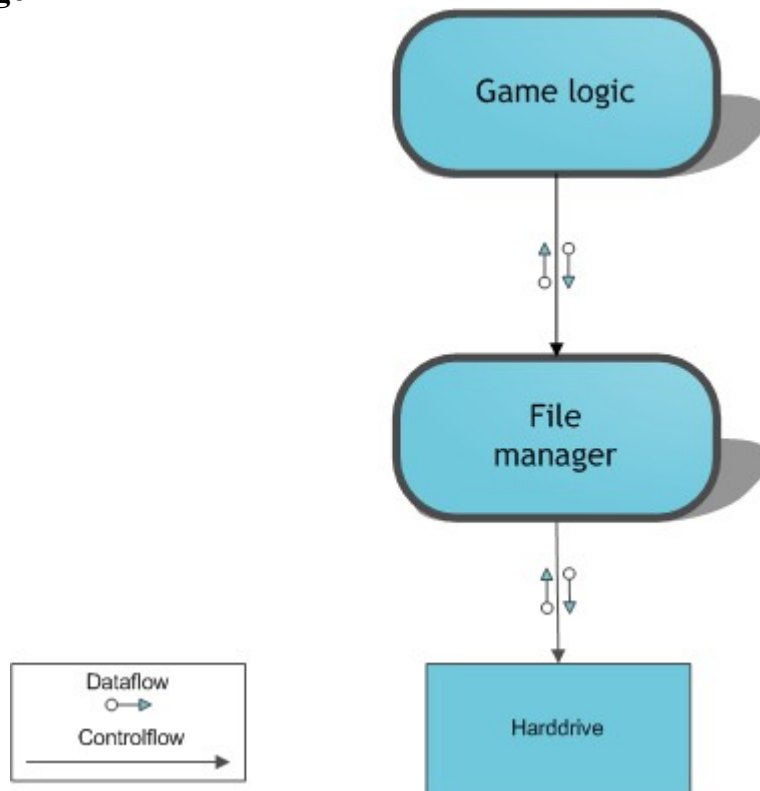
#### **2.2.5 File manager**

This object controls the input and output from and to files on the hard drive, such as textures, sounds, high score list, settings and similar.



## 2.3 Detailed Architecture

### 2.3.1 File manager



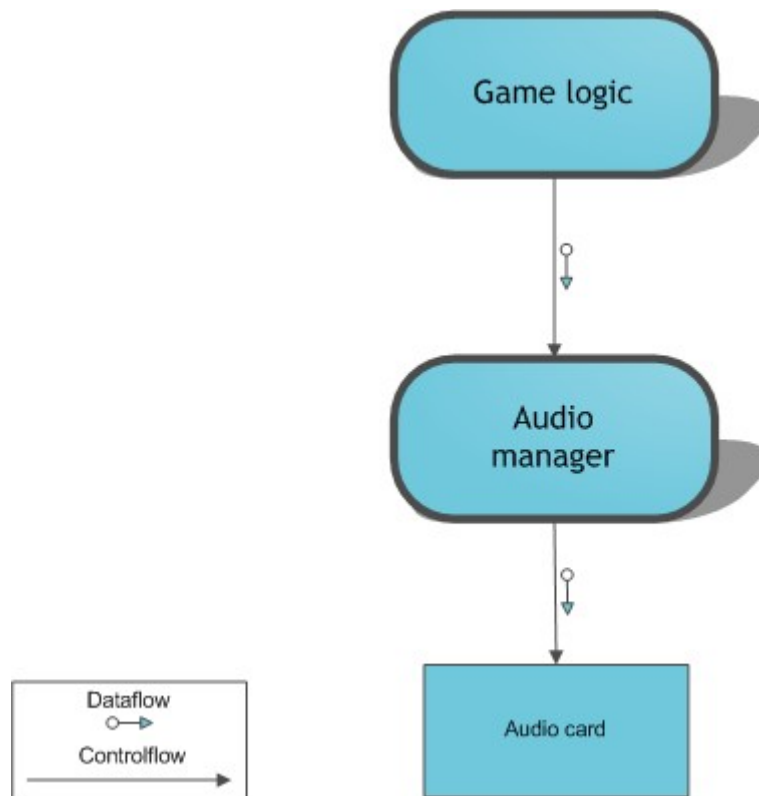
#### Control flow

The control flow for the connection between the game logic components and the file manager is a one-way control channel. The game logic components will access the hard drive through the file manager layer. Inside the file manager there will be functions to load and store data on the hard drive where all components are stored. This will be controlled by the game logic since the file manager can't know when data is needed in-game.

#### Data flow

Data flows in both direction, but most data is transferred from the hard drive through file manager to end up in the game logic. Typical data that is transferred in this direction is sound files, bitmap textures and stored settings for the game. In other words, everything the game needs to load to be able to run. In the other direction, from the game logic to the hard drive, we have for example storing of game settings and high score list.

## 2.3.2 Audio Manager



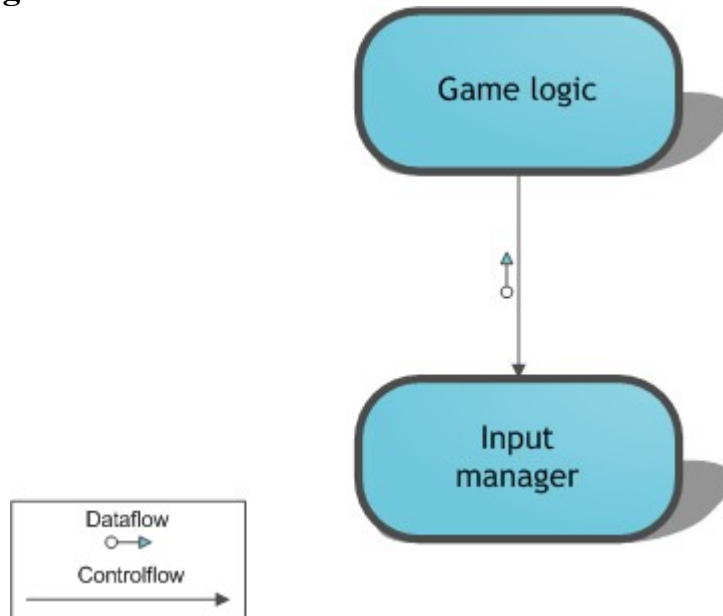
### Control flow

The game logic components will, when requested, command the audio manager to play a specified sound clip. The audio manager will then handle the connection to the computer's sound card and make sure that the sound clip is played correspondingly.

### Data flow

The data flow for the audio manager is a one-way channel, from the game logics through the audio manager to the computer sound card. The data will contain in-game sound effects and/or music from the game.

### 2.3.3 Input manager



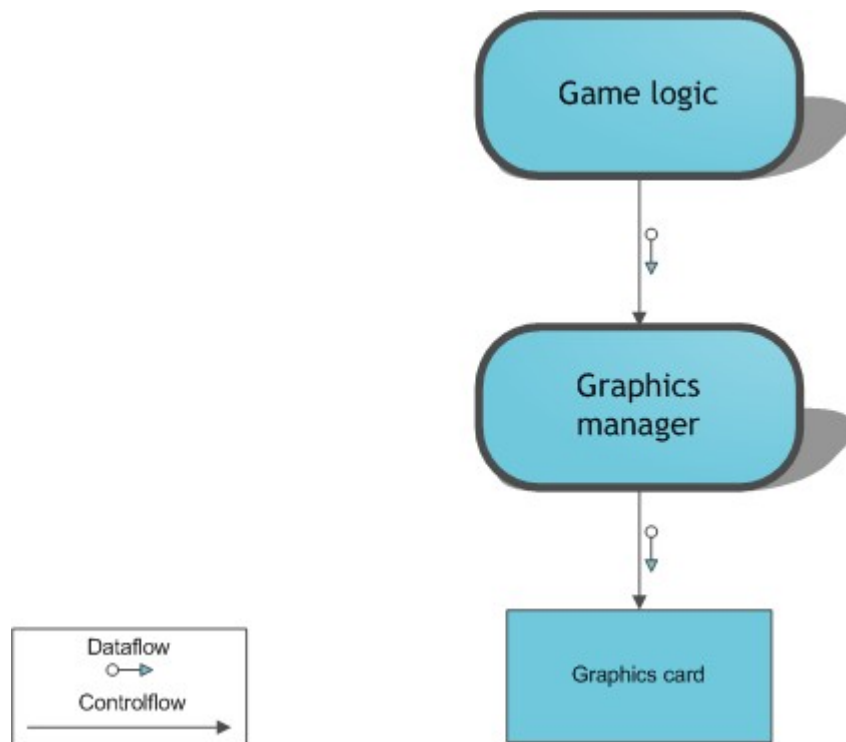
#### **Control flow**

The game logic will frequently control with the input manager if there's any new input from the user. The game logic will act accordingly to the input. The input manager will act as a layer between the game logic components and the system hardware.

#### **Data flow**

This object interprets the input from the keyboard and sends the information to the Game logic object. When the users presses keyboard buttons, an event is sent from the Input manager to the Game logic object.

### 2.3.4 Graphics manager



#### **Control flow**

The game logic components will, when requested, command the graphics manager to draw the current frame or state on the screen. The graphics manager will then handle the connection to the computers graphics card and make sure that the frame is drawn correctly on the screen.

#### **Data flow**

It will receive information from the Game logic object for processing. The processed information is then sent to the graphics card which then draws it on the display. All the graphical content supposed to be on screen will be drawn by the graphics manager. This includes the game character, textures, background and menus.