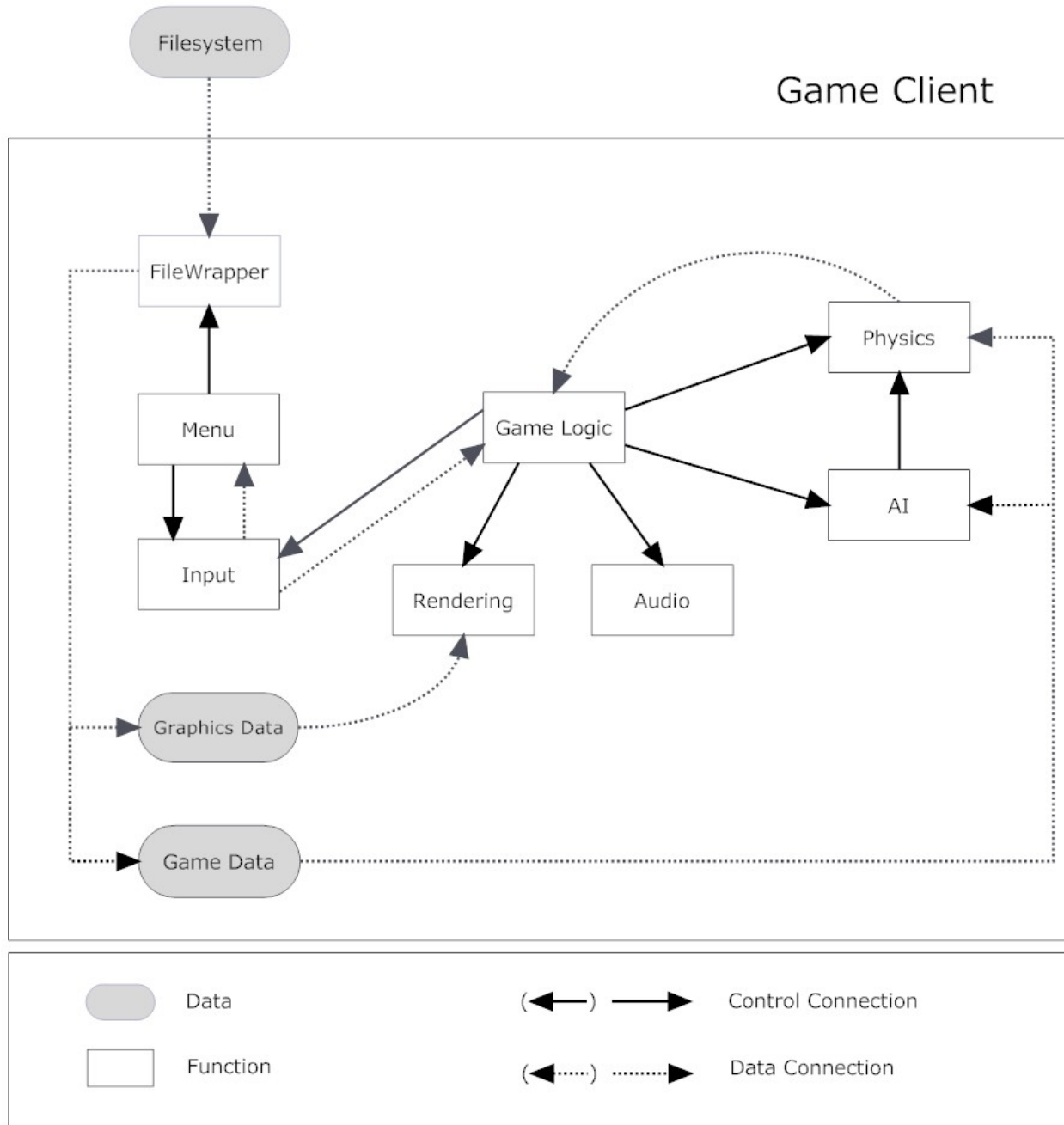


# ***'Balls of Steel'***

## **Group 4**

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## 2.2 Overall Architecture Description



**AI** - Takes care of the enemies AI and their game logic. More specifically in what way the enemies will move and how they will react upon coming into close range of the ball.

**Audio** - This module is called upon when another module wants to play a sound clip.

**File Wrapper** - Handles loading and saving of data into the phones memory.

**Game Logic** - Handles everything that the other modules don't. That includes the balls motion and calling the other modules for updates.

**Input** - Pulls the state of the input (joystick/keypads) and presents these.

**Menu** - Presents the menu on screen and gives the user the capability to select whether he wants to continue, change settings, see the high score, create a new game or quit.

**Physics** - Controls the player's gravity and all collision detection.

**Rendering** - Renders the graphics for the ball, the enemies, the items and the map and presents it on the screen.

**Game Data** - Handles the gamedata received from the filewrapper, e.g. information about enemies position etc.

**Graphics Data** - Handles the graphics data received from the filewrapper.

## 2.3 Detailed Architecture

The detailed architecture will be described by Class Responsibility Collaborator cards (described by e.g. Beck and Cunningham, 1989, Ref 2).

FileWrapper	
Responsibilities	Collaborators
Main task is to load data from the file-system and then distribute it to the collaborators. It also handles saving of high-score and the currently active level and the remaining time.	Graphics Data Game Data Menu

Menu	
Responsibilities	Collaborators

Provides different options, including new game, continue game, view high-score, settings, exit, which the player can choose between.	FileWrapper Input
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Input	
Responsibilities	Collaborators
Retrieves direct input from the mobile phone's key/touchpad.	Menu Game Logic

Game Logic	
Responsibilities	Collaborators
The game logic will be the central core of the game and will organize and call upon the other classes.	Input Rendering Audio Physics AI

Rendering	
Responsibilities	Collaborators
Presents the graphic upon the screen.	Game Logic Graphics Data

Audio	
Responsibilities	Collaborators
Handles the sound and music output.	Game Logic

AI	
Responsibilities	Collaborators
Handles the movement and action of the obstacles and enemies.	Game Logic Physics Game Data

Physics	
Responsibilites	Collaborators
Handles the calculations for the gravity and collision detection.	Game Logic AI