

# Physics-Based Chipmunk2D Game

## System Architecture

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### Revision History

Date	Version	Notes
January 10, 2015	1.0	Created document
January 11, 2015	1.1	Major additions to all sections

# 1 Introduction

## 1.1 Overview

This document is provides a . The document is split into two parts: the system architecture which gives a more general overview of the design goal and intended module interactions, as well as the detailed design which covers the intended implementation in greater detail.

## 1.2 Document Template

The Parnas template of the Module Guide and Module Interface Specification was followed in creating this document. Adherence to this template was not , and in some cases the provided marking scheme was used .

# 2 Design Principle

The Model-View-Controller architectural pattern will be used as the main principle of design for this project. As such the main consideration of the design is to fully separate the operation of the game in terms of user control, the audiovisual output, and the game model.

# 3 Anticipated Changes

## 3.1 Likely Changes

The following changes are likely to occur as the project

AC1 The number of object classes will likely be expanded. Currently the game objects (characters, traps, platforms, etc.) are represented as generic static, dynamic, and kinematic object classes. Further class specialization may be useful.

AC2 Changes to the

AC3

## **3.2 Unlikely Changes**

UC1 The way sound files are loaded and stored is unlikely to change.

UC2 The way object files are loaded and stored as GPU data is unlikely to change.

UC3 The way shader files are loaded and stored is unlikely to change.

UC4

## **4 Module Decomposition**

Module decomposition

### **4.1 Modules**

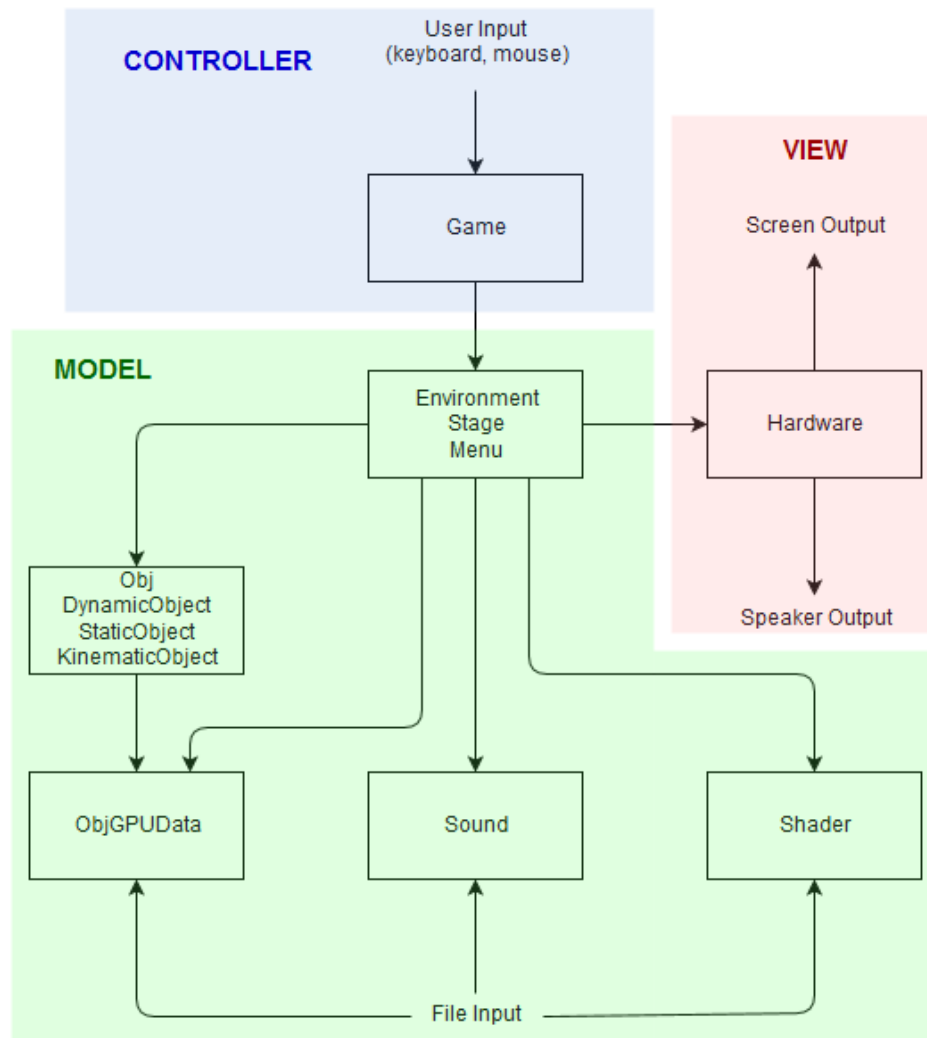
The following modules

### **4.2 Uses Diagram**

## **5 Traceability**

### **5.1 Requirements**

### **5.2 Changes**



**Figure 1:** Uses diagram with MVC partitioning.