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| **Group:** | James Beasley, Charles Beck, Charles Duso, Alexander Grzesiak, Erik Strauss |
| **Project Title:** | Boston University - Microfluid Experimentation Data Generator |
| **Deliverable:** | D.5 Internal Design |
| **Course:** | CS386 – Spring 2017 |
| **Instructor:** | Professor Gerosa |
| **Github:** | https://github.com/TheAwesomeEgg/CS386ProjectGroup1.git |

# 1 Introduction

The purpose of this document is to examine the macro structure of the system we are designing as well as the components of the system and how they interact. This document will be heavily visual-based with textual descriptions to support each visual. As a reminder, we are developing a hardware instruction generator for the microfluidic experimentation group at Boston University.

# 2 System Architecture

In this section, we consider the system-wide architecture. We will first discuss the architecture we have implemented in detail and then explain the styles and patterns we employed to achieve our architecture. Visuals will accompany textual descriptions where necessary.

## 2.1 Architecture Description

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## 2.2 Architecture Style and Design Patterns

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# 3 System Descriptions

In this section, we consider the interplay of the components that makeup the system architecture. We have included several diagrams that serve to demonstrate functionality, implementation and execution of the system.

## 3.1 Class Diagram

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## 3.2 Sequence Diagram

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## 3.3 Object Diagram

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# 4 Conclusion

This concludes the internal design description of the system we are designing. We are satisfied with the current design, as all requirements are satisfied; but, are prepared to make changes as needed.

# Group Participation

Listed below is a table containing the group participation weights for each team member.

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| --- | --- |
| **Team Member** | **Participation** |
| James Beasley |  |
| Charles Beck |  |
| Charles Duso |  |
| Alexander Grzesiak |  |
| Erik Strauss |  |

Table 1: Group Participation Weights