**CPT-287 Group Project Report**

**By: Sam Atienza, Ryan Schoonover, Seth Wolf, Zach Deall**

**Project 1A: Movie Management System**

**System Design**

This program runs off a text-based menu in the console. Each function of the program is controlled by user input. For example, if the user were to input “D”, the program would display the movies. This system utilizes many data structures in the java language including linked lists, iterators, and deques. In this project, the linked lists data structure was used twice. One linked list was used to hold movies that had been received, but not released, and another linked list was used to hold movies that had been received and released. These linked lists were navigated via the use of the next data structure, iterators. In this project, three iterators were used. The first iterator, it1, was used to help navigate through the linked list responsible for holding the released movies. The second iterator was responsible for helping in the navigation of the linked list holding received movies. Finally, the last iterator was created to help navigate release. Along with linked lists and iterators, deques were also used in this project. Many deques were used for various purposes, but most were utilized for the purpose of copying other data structures.

**UML Diagram**

**Test Cases**

**Contributions:**

**Sam Atienza –** Text based menu, Sample input file, Project Repository, Project Report

**Ryan Schoonover –** Add class, Movies class

**Seth Wolf –** Add class, Count class, Display class, Movies class

**Zach Deall -**

**Future Improvements**

While the system was built to be as efficient as possible, room for improvement always exists in systems like these. For starters, to reduce lines of code and redundancies in the program, the case system in Java could have been utilized instead of using multiple if statements.