**Project #4**

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| **Team** | <Team Name InBlack> |

***Delete or replace everything in blue. At the end, all of the text should be black.***

***This is a “living document”, meaning its content and format will grow with the implementation of the project. Use it to capture key project concepts and to document important design decisions.***

***You may use any drawing tool for your UML diagrams. ArgoUML or SmartDraw are two options. If your diagrams are too big to cut and paste into this document, provide a reference to the external image file(s) [JPG or PNG] where they can be found or segment your image into legible sections.***

# Class Diagram(s)

This is for UML class diagram capturing the relationships between classes. It is only necessary to show methods that are publically accessible by other classes. Only show an instance variable of a class if it is publically accessible

# Class Descriptions

Identify the classes. For each class, specify the information it maintains and the functionality it provides. Provide sufficient detail so that the purpose of each class in the design is clear, and so your instructor can assess each class’ appropriateness for the problem at hand.

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| --- | --- |
| <Class Name 1> | <Class state   * What information is the class responsible for maintaining? * E.g., a printing subsystem might hold the current status of all the printers it controls as well as the queue of print jobs waiting to be printed.   Class behavior   * What services does the class provide to other class? * E.g., the printing subsystem might support the queuing up of new jobs, estimating the time until a given job completes, or emailing status information at the end of a job. |
| <Class Name 2> | <Class state   * What information is the class responsible for maintaining?   Class behavior   * What services does the class provide to other components?> |
| <Class Name 3> add more rows as needed. | <Class state   * Etc.   Class behavior   * Etc.> |

# Sequence Diagram(s)

UML sequence diagram for the agreed significant use case(s).

*While you may reference an external file here, most instructors* ***strongly*** *prefer embedded images, or, failing that, external files in generic formats such as JPEG, PNG or PDF.*

# Design Rationale

This is a running list of issues that arise as your design process proceeds. This is an important section of the design document as it captures the **thought process** of the product's designers. It includes why or why not (rejected solutions) a design decision was made and supports future changes to the product. It should be updated whenever a design change occurs.

*It is RARELY the case that the first design you consider is the best one that you can come up with that meets the requirements and that can be implemented, tested, and delivered on schedule. Your instructor will be looking for signs that you considered at least a few approaches, and that you had a coherent rationale for preferring the design your team eventually adopts.*

*This is the place to record such thoughts – what alternatives did you consider? What are the strengths (and deficiencies) of the final design compared to the other alternatives considered? Why did you select the approach you finally chose? This last question should be answered with an eye to the tradeoffs inevitably involved in creating an appropriate design.*

*In addition, if (not when) the design has to be adjusted to meet unexpected problems or new requirements, this is the place to record what changes were made, what effect these had on the work that had been completed to date, and the rationale for the making changes (as opposed to “just toughing it out”).*