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Requirements Analysis

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<u>Users:</u> The users of this system include students, faculty and staff (instructors, TAs), and system administrator(s) of a computer science department.

User Activities: Students – Submit programming work

Instructors – Manage course, sections, TAs, and students; Collect assignments for grading, submit grades

TAs – Collect assignments for grading, submit grades

System Administrator – Manage accounts of instructors

Relevant Data: Submit work – Information about the students (names, ID numbers, assignment to submit)

Manage course, sections, TAs, students – Information about the course and sections (section times, locations), TAs (names, ID numbers), and students (names, ID numbers)

Collect assignments – Information about who submitted the assignment (student name, ID number, course section)

Manage accounts – Information about instructors (name, employee number)

Constraints: The constraints would involve a tiered permission system where students have the least permission. They should only be able to view their courses, submit assignments, and view data uploaded by the instructor/TAs. Students should not have permission to view other student's information apart from names of who else is in their class. The TAs should have the next tier of permission which allows them to collect assignments, assign grades, and upload course information and data, but not manage students or the course/sections as a whole. Instructors

should be able to do everything the TA can do but have permission to make changes to the course/sections as a whole. The system administrator should ensure that the system follows all rules and regulations to protect student, instructor, and TA data.

System Constraints and Requirements: Students, instructors, and TAs must have a desktop, laptop, or mobile device with an internet connection and access to a web browser or the submission software installed. Some form of database is required to hold the information of all the users and the assignments that have been submitted, and eventually graded.