LMS Project Report

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**Team Model**

Our team used a Democratic Team Model. We found this to be beneficial since it does not enforce any formal team hierarchy. A Democratic team structure is appropriate for less understood problems. It allows the group to invent better solutions rather than using a chief programmer team. This project didn’t require many engineers so our group of 5 worked well with this model. This model allowed us to encourage egoless programming and allowed our team to share and review each others work.

**Test Cases**

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The test cases we conducted have passed most, if not all, of our requirements as of our last tests.

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| **Test** | **Expectation** | **Pass/Fail** |
| Login (as governor, headmaster, professor, and student) | Display appropriate dashboard content if successful login. If login is unsuccessful, message is shown. | **Pass** |
| Enroll Courses | Student can select which courses to enroll in and add them to registered courses. Will update info in database. | **Pass** |
| Drop Courses | Student can deselect enrolled courses and update the info to remove course from student’s registered courses. | **Pass** |
| Create Assignments | Professor can create assignments and assign to course(s). | **Pass** |
| Delete Assignments | Professor can delete assignments and remove associated grades if turned in already. | **Pass** |
| GPA calculation | GPA is calculated for each student with given grades and can be viewed by students. Cannot be edited by lv 1, 2 ,or 3 users. | **Pass** |
| Add/Disable Users | Governor can add and disable users (student, professor, or headmaster). New users can login and disabled users can no longer login. | **Pass** |
| Grade Assignments | Professor can grade assignments for students enrolled in their courses. | **Pass** |
| View Grades | Students can view assignment grades. Cannot modify grades. | **Pass** |
| View Assignments | Students can view assignments for enrolled classes. | **Pass** |
| Submit Assignments | Students can submit assignments for a given coursework. | **Pass** |
| Logout | User returns to login screen and is required to login again to use system. Login flag is off. | **Pass** |

Updated Test Cases

**Use Cases**

Use Case 1 (**Add/Disable Users**)

* Gilderoy Lockhart did not work out as a professor. Albus Dumbledore logs in and **disables** Gilderoy Lockhart’s account.
* Dumbledore **adds** a new teacher: Remus Lupin.
  + Username: Remus.Lupin
  + Password: RLPass
  + Role: Teacher
* System discovers what will be his unique id in the system.
* All IDs start with 900 followed by role (teacher is 3) followed by 2 digits which is one more than last entry.
* Dumbledore Enrolls Remus Lupin in all 7 years of Defense Against the Dark Arts so he can teach the class.
* Dumbledore Logs off.

Use Case 2 (**Students enroll in classes**)

* Harry Potter, Hermione Granger, and Ron Weasley all **enroll** in the following classes:
  + Charms Year 3
  + Defense Against the Dark Arts Year 3
  + Divination Year 3
  + Potions Year 3
  + Transfiguration Year 3
* Fred Weasley, George Weasley, and Angelina Johnson all **enroll** in the following classes:
  + Charms Year 5
  + Herbology Year 5
  + Divination Year 5
  + Potions Year 5
  + Transfiguration Year 5
* All users log out when they are done.

*Note: only classes listed are the ones that match their "year" entry in their enroll-in-courses table.*

Use Case 3 (**Create, Turn-in, and Grade Assignment(s) and View Grades**)

* Severus Snape **assigns** the following assignment then logs out to the 5th year potions class:
  + 1 roll of parchment on the properties of moonstones. Total point 10.
  + Angelina logs in and sees the assignment is due. She **turns it in**.
  + Fred Weasley logs in and sees the assignment is due. He **turns it in**.
  + George Weasley fails to turn in the assignment.
* Seversus Snape logs in and **records** their grades: Angelina: 6, Fred: 3, George: 0
* Angelina, Fred and George log and **view** their grades.
* All users log off.

Use Case 4 (**Assign Professor to Class and** **Delete Assignment (and associated grades)**)

* Snape subs for Lupin because he is sick. Dumbledore has to "enroll" Snape as a teacher of Defense Against the Dark Arts.
* Snape assigns the 3rd year defense against the dark arts class an essay on the qualities of the werewolf.
  + Hermione turns in the assignment.
  + Harry and Ron do not.
* Lupin recovers, logs in and **cancels** the assignment.
* Hermione, Ron, and Harry all log in to see the assignment is no longer there.

Use Case 5 (**Reassign Headmaster/Headmistress**)

* Delores Umbridge replaces Albus Dumbledore as Headmistress of the school
* Lucius Malfoy **adds** a new Headmistress: Delores Umbridge
  + Username: Delores.Umbridge
  + Password: DUPass
  + Role: Headmistrss
* Lucius Malfoy deactivates user Albus Dumbledore

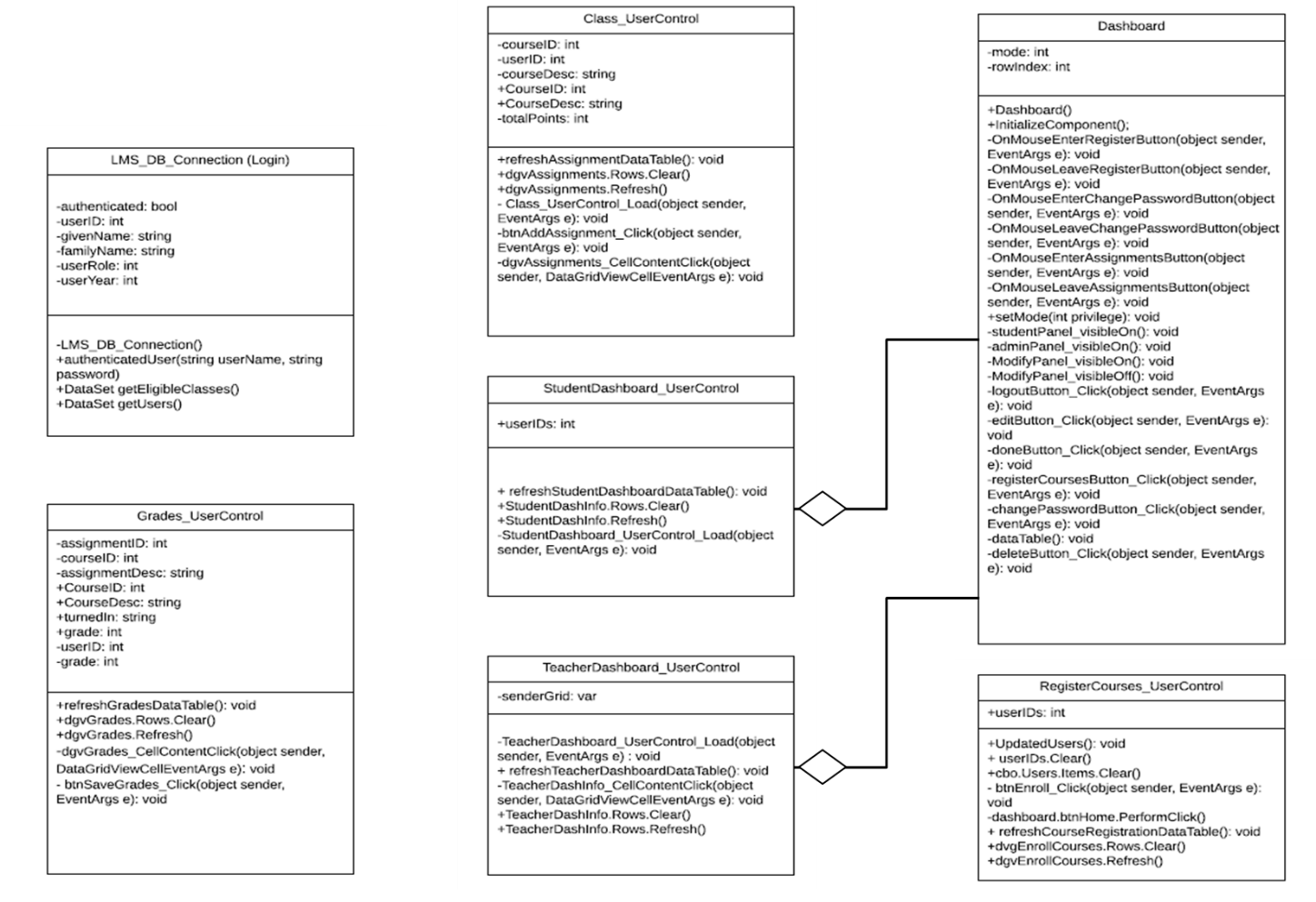
Use Case 6 (**Deactivate User Account**)

* Fred Weasley and George Weasley leave the school.
* Delores Umbridge **deactivates** their accounts.
* Fred and George can no longer log in.

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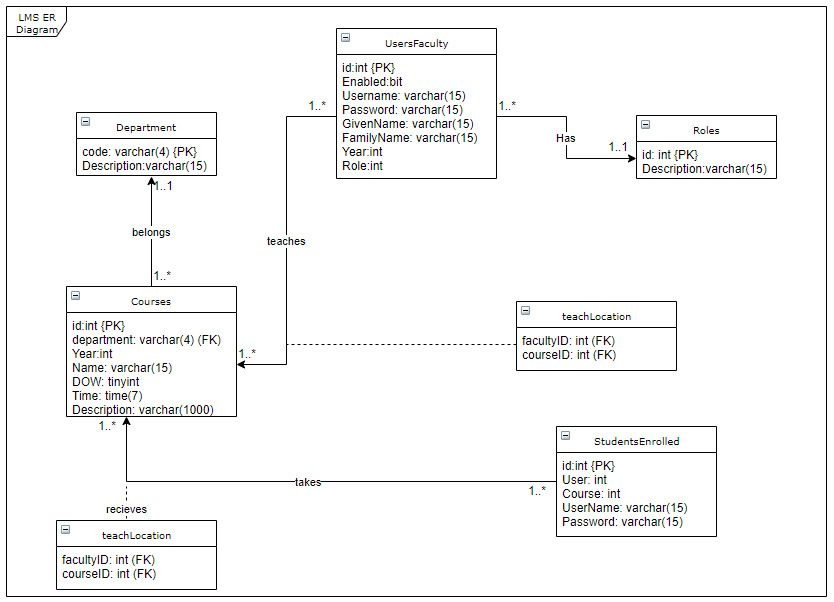
**UML Diagrams**

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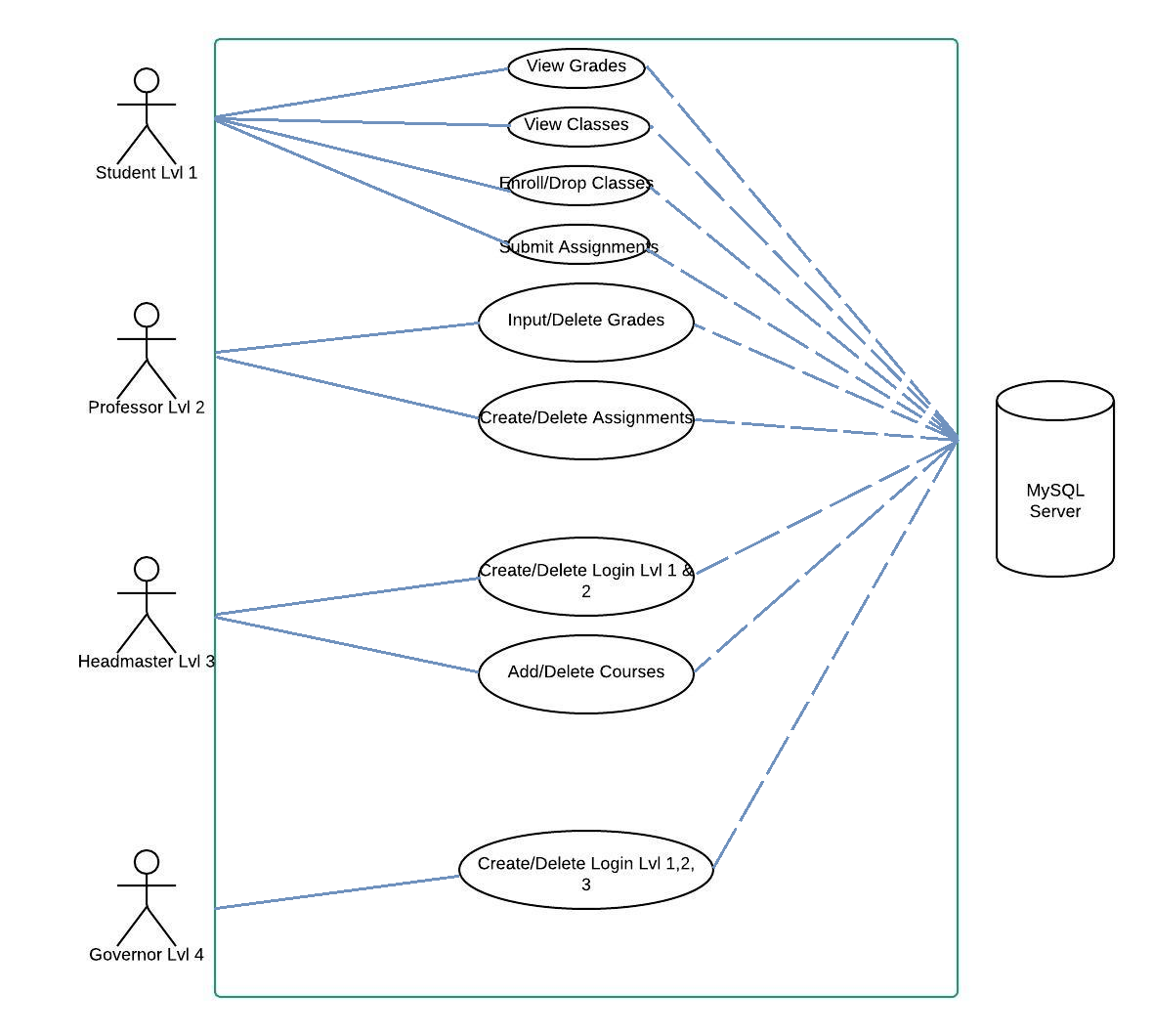


Class Diagram

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ER Diagram

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UML Diagram

**Artifacts**

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| **CLASS** |
| **User class** |
| **RESPONSIBILITY** |
| 1. Access Username 2. Access Password 3. Privilege (if student, professor, headmaster, or governor) |
| **COLLABORATION** |
| **Login class** |

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| **CLASS** |
| **Login class** |
| **RESPONSIBILITY** |
| 1. Verify input (w/i login class) 2. Check privilege (if student, professor, headmaster, or governor) 3. Load home page Dashboard class |
| **COLLABORATION** |
| **Dashboard class** |

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| **CLASS** |
| **Student class** |
| **RESPONSIBILITY** |
| 1. Display name 2. Display ID 3. Enroll/Drop courses 4. Exam scores for each course 5. Calculate GPA 6. View GPA 7. Turn in assignments 8. Log out (go to login panel) |
| **COLLABORATION** |
| **Dashboard class**  **Student class** |

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| **CLASS** |
| **Dashboard class** |
| **RESPONSIBILITY** |
| 1. Display name of user 2. Modify buttons **on** (if role < 4) send request to **student class** 3. Modify buttons **off** (if role == 4) 4. Display student info. (if headmaster) 5. Display assignments/courses (if role >= 2)    * Edit Assignments (If professor)    * Edit Courses (if headmaster) 6. Add/Remove Users (if governor) 7. Log out (go to login form) |
| **COLLABORATION** |
| **Login class**  **Student class** |

CRC Cards

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**SPMP**

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