# CS 255 Module Two Assignment Template

## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Multiple roles within the LMS need to be created: students, Educators, Admin | This is so that the students can submit course material; Educators may grade and comment on submitted work; admins can add, remove, and schedule new terms for students | Personal Experience |
| A localized dashboard for the students and educators to access term. Features such as inbox, course grades, assignments, contact information for advisor, announcements, and general discussion board. | These features work as contact points to address the status of each student throughout the course term. |  |
| A backend data scraper for data analysis of each course | On the backend, to know if a course is working well or needs revision. Having a data scraper of previous terms allows the educators and admin to review how well a course is performing and if any changes or announcements need to be made to better prepare students. |  |
| Language packages need to be added to maintain a global access acceptance to the programs. | With allowing moore languages to be supported a more vast student population can be accepted without issues of language barrriers. |  |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Secure APIs with encryption | Having a secured system prevents potentials of hacking and brute force attacks on the information for the schools; such as grades, personal information, deletion of data collected, theft of school collected data, or changing of grades causing fraud and distrust in the school’s systems. |  |
| Structuring the system to be upgraded quickly and efficiently not to disrupt the term activities. | Technology is constantly being updated and so should the school system and backend on how the course material, general operations, and website run in a technologically advancing era. |  |
| Mobile and browser accessibility | The term material should be accessible by mobile devices as well as by browser to offer as many methods to access the course material and inbox as possible. |  |

## Assumptions

| **Assumption** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Email addresses are dispersed to each individual with their roles attached to created an Org. chart | Internal Email is a good form of communication, especially when a paper-trail is required for processing actions and to verify communication was had. |  |
| All users have access to an internet browser and knowledge of how to navigate through it. | In today’s age, everything is connected to the internet so the odds of someone working in some fashion with an online University without knowledge of how to use a browser is rare. |  |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Blind users may be impeded when it comes to certain courses as the external reading material may not have an audio capability that is easily accessed without sight. | Most of my experience with the study material has been incredibly accessible for those with sensory disabilities. However, I have seen a few articles that were difficult to read through with speechify but was still able to limp along by manipulating the information a bit. This would be nearly impossible for someone without sight, along with a software engineering degree entirely as it is highly dependent on visual input and manual output of code. |  |
| Server based system over Cloud based system | The LMS system will have to be server based as having a cloud can expose the system to cloud based attacks and puts the control of the system out of the university’s control and at the capability of the cloud provider which is a huge risk for a heavily regulated entity as a University. This is also a limitation because it means that physical upgrades take longer to implement as it may take the system down momentarily affecting normal daily operations including student assignment submissions and educator grading periods. |  |