

**Sri Lanka Institute of Information Technology**

**LEARNING MANAGEMENT SYSTEM**

Information Technology Project Management 2019

Project ID: WD\_19\_06

Submitted by:

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**Product Backlog**

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| **Product Backlog Item (PBI)** | **Priority** (1 -10, 1 is highest) | **Reason for selecting Priority (Business Value, ROI, Time, Dependencies)** |
| User Login | 1 | Without login in to the system student can’t enroll or view any courses. enrolling for any courses will depend on login. |
| User Profile | 2 | User profile include all the student details and he/she can edit his or her details, update passwords, usernames, and can view all the courses enrolled. |
| Manage Courses | 3 | System should have the courses because courses are the main content in the system. adding new courses will increase the business value of the site. |
| Send notification | 3 | When a new course is added student will notified by the system. the system will send an email to inform about the new course. Because of this item it will increase the business value of the system |
| Create Separate pages | 4 | By creating separate pages, students can easily refer course materials, without getting lost in the site |
| Course material management | 5 | With this item student can upload their assignments, projects, get the lecturer slides and view notices |
| Search Courses | 6 | Students can easily search and get enroll for their courses. This will save time |
| Follow courses | 7 | After creating an account student can enroll for courses |
| Enrolled Course handling | 8 | Student can unroll from their courses. |
| Comment section | 9 | Every course has a comment section, everyone asks any questions about the course and anyone can provide answers. also, student is free to give their experience with this course |
| Libraries (reference books) | 10 | Student can refer these additional books for their assignments, and for their lecturers |
| Student counter | 10 | This will keep a track of the students who are enrolled for courses |
| Deadline reminder | 10 | Students will be notified before assignment due dates (before seven days) |

**Sprint Backlog: Sprint 1**

There should be a column to mention the ‘planning poker estimate’ value of each member.

|  |  |  |  |  |  |  |  |  |  |  |
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| **Backlog Item** | **Epic** | **User stories** | **Decided Story Points** | **Planning poker estimate of Khema** | **Planning poker**  **estimate of Chamodi** | **Planning poker estimate of Chamudika** | **Planning poker estimate of Dinuka** | **Planning poker estimate of**  **Umindu** | **Planning poker estimate of**  **Pramulitha** | **Reasons for estimate** |
| User Login | As a user I want to login to the system so I can use the site resources. | As a student I want to login to the system so that I can follow the courses. | **3** | 2 | 3 | 2 | 5 | 5 | 2 | Dinuka and Umindu decided to give 5 points because validations and creating interfaces take a long time. But finally, all agree for the majority point. |
| 2 | 3 | 2 | 3 | 5 | 2 |
| 3 | 3 | 2 | 3 | 3 | 2 |
| As a lecturer I want to login to the system so I can manage course materials. | **2** | 2 | 3 | 3 | 3 | 2 | 3 | Need to modify some parts of the student login. |
| 2 | 3 | 2 | 3 | 2 | 2 | Finally, all agree for the majority point. |
| As an admin, I want to login to the system so I can manage courses. | **1** | 1 | 1 | 3 | 1 | 2 | 2 | Same as the lecturer login code. So much time is not needed. |
| User Profile | As a user I want to have a profile so I can manage my own details. | As a student I want to have a user profile so I can change my personal details. | **5** | 5 | 8 | 8 | 8 | 5 | 8 | Some decided to give 8 points because need to include crud functions. So, implementation takes a much time. Finally, story point is decided by the majority. |
| 5 | 8 | 5 | 8 | 5 | 8 |
| As a student I need a user profile so that I can change login credentials provided during registration. | **3** | 5 | 3 | 8 | 5 | 3 | 5 | Chamodi who is implementing this section has a clear knowledge about the function with previous experience. |
| 3 | 3 | 5 | 5 | 3 | 3 |
| As a student I want a user profile so I can see my enrolled courses. | **8** | 8 | 8 | 3 | 8 | 8 | 5 | Enroll courses is done after adding courses to system. So, it takes some time. Finally, story point is decided by the majority. |
| As an admin, I want to have a profile, so that I can update my credentials. | **3** | 5 | 3 | 5 | 3 | 5 | 5 | Chamodi who is implementing this function has a clear knowledge about the function with previous experience. |
| Manage courses | As user I need to manage courses so that I can manage them properly | As an admin I want to manage courses so I can add new courses. | **2** | 2 | 3 | 2 | 3 | 5 | 3 | Chamudika have previous experience about this add function and she can implement this part with less time. So, all agree to that story point. |
| 2 | 2 | 2 | 2 | 3 | 3 |
| As an admin I want to manage courses so I can update those courses | **2** | 2 | 3 | 2 | 3 | 3 | 3 | Updating courses is done after adding courses and simple modifications need to do. |
| 2 | 3 | 2 | 3 | 2 | 2 |
| As an admin I need course management to remove unimportant courses from the system | **2** | 2 | 3 | 2 | 3 | 3 | 3 | Decided by majority. |
| 2 | 3 | 2 | 3 | 2 | 2 |
| As a student, I want to view the list of courses available, So I can select courses that I want to follow. | **3** | 5 | 5 | 3 | 3 | 5 | 5 | Some decided to give 5 points because of database retrieval part. But Chamudika have past experiences. Finally, all agree with that point. |
| 3 | 5 | 3 | 5 | 3 | 3 |
| Notification Management | As an admin I want notification management to inform users | As an admin I want notification management so that I can send a notification after adding a new course to the system. | **13** | 8 | 13 | 13 | 8 | 13 | 8 | Most of the members do not have understanding about email sending. So, it will take much time to do this. |
| 13 | 13 | 13 | 8 | 13 | 8 |
| As an admin I want notification management so that I can send notification after making some changes any of the courses. | **5** | 13 | 8 | 5 | 8 | 8 | 5 | Chamudika who is implementing this section has a clear knowledge about the function with previous experience. |
| As a student I want notification management so that I will be informed about new courses. | **1** | 2 | 1 | 1 | 2 | 1 | 1 | After discussing about the story, all members agree with this point. |
| Create Separate pages | As an admin I want to have spate pages for this site, so that I can easily go through | As an admin I want to create separate pages So that I can manage course materials easily. | **2** | 3 | 3 | 2 | 3 | 2 | 3 | Creating separate pages won’t take much time. |
| 2 | 2 | 2 | 3 | 2 | 3 |
| As a student I want to have a separate page for display course details when a new course is added, so that I can view lecturers easily. | **3** | 3 | 3 | 5 | 3 | 5 | 3 | Decided by majority. |
| Course material management | As a user I want to manage course materials so I can provide good course flow for the students | As a lecturer I want course material management so I can add new course materials for the courses. | **5** | 5 | 8 | 5 | 5 | 5 | 8 | Members do not have knowledge about uploading documents. So, it will take much time to get an understanding about it. |
| 5 | 8 | 5 | 8 | 5 | 8 |
| As a lecturer I want course material management so that I can update relevant course materials | **3** | 3 | 3 | 5 | 5 | 3 | 5 | There is only one “update” part, so it won’t take much time. |
| 3 | 3 | 3 | 5 | 3 | 5 |
| As a lecturer I want course material management so that I can remove any unnecessary materials | **1** | 1 | 1 | 1 | 2 | 1 | 2 | There is only one “delete” part, so it won’t take much time. |
| As a lecturer, I want to add notices related to the course, so that student can aware about them. | **2** | 2 | 3 | 2 | 3 | 2 | 3 | After discussing about the story, all members agree with this point. |
| 2 | 3 | 3 | 2 | 2 | 3 |
| As a student, I want to download course materials so that I can learn those things very easily. | **8** | 8 | 8 | 5 | 3 | 8 | 5 | All the members need to find how to download documents. So, it will take much time. |
| 8 | 5 | 5 | 3 | 8 | 5 |
| As a lecturer, I want to download student’s assignments which they upload so that I can mark them. | **3** | 3 | 5 | 3 | 5 | 3 | 5 | There is a code for course material management. So simple modification is needed to do. So, no much time needed. |
| 3 | 5 | 3 | 5 | 5 | 5 |
| As a student I want to have a separate link, so that it will easy to upload assignments. | **5** | 5 | 5 | 8 | 5 | 8 | 5 | Creating links take a much time because members do not have proper understanding how to do it. |
| 5 | 5 | 8 | 5 | 8 | 8 |

**Sprint Backlog: Sprint 2**

There should be a column to mention the ‘planning poker estimate’ value of each member.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Backlog Item** | **Epic** | **User stories** | **Decided Story Points** | **Planning poker estimate of Khema** | **Planning poker**  **estimate of Chamodi** | **Planning poker estimate of Chamudika** | **Planning poker estimate of Dinuka** | **Planning poker estimate of**  **Umindu** | **Planning poker estimate of**  **Pramulitha** | **Reasons for estimate** |
| Search Courses | As a user I want to search courses so I can visit to the relevant course | As a student I want to search courses so I can easily get in to relevant course. | **5** | 3 | 8 | 5 | 5 | 8 | 3 | There is database retrieval, by the search box. So, it’s a little bit complex code for us. So, we need much time. |
| 3 | 5 | 5 | 5 | 5 | 3 |
| As an admin I want search course so I can do the changes for that course easily. | **2** | 1 | 1 | 2 | 2 | 1 | 1 | There is a code for students’ search courses. So simple modification is needed to do. So, no much time needed. |
| 2 | 1 | 2 | 2 | 2 | 1 |
| As a student I want to search courses I can find out whether my course is available or not. | **2** | 2 | 1 | 2 | 2 | 2 | 1 | Same code is using for this function also. So, no need much time |
| 1 | 2 | 2 | 2 | 2 | 1 |
| Follow courses | As a user I want to enroll course so I can refer the resources within that course | As a student I want to see what the courses are to follow. | **5** | 5 | 5 | 8 | 3 | 5 | 5 | After student apply for a course, we need to send an email saying the enrollment key for that course. So, we discuss that we need more time for this function |
| 5 | 5 | 5 | 3 | 5 | 5 |
| Enrolled Courses handling | As a user I want enrolled courses handling so that I can follow courses easily. | As a student, I want enrolled courses section, so that I can easily continue my studies. | **8** | 8 | 5 | 8 | 5 | 8 | 8 | After login to the system he or she can be easily seeing their enrolled courses in course section so it’s a complicated task, so we decide we need some time to implement this. |
| 8 | 8 | 5 | 5 | 8 | 8 |
| Help course (comment section) | As a user it’s important to have a comment section in every course, so that I can enter my problems and get them answers. | As a student I want a comment section, so that I can enter my problems in to the comment section. | **5** | 3 | 5 | 2 | 5 | 3 | 5 | It takes some time because there are some changes with the crud functions in the database. |
| 5 | 2 | 5 | 3 | 5 | 3 |
| As a student I want comment section, so that I can answer questions that I aware about. | **8** | 8 | 5 | 8 | 3 | 5 | 8 | Members do not have knowledge about Q & A pages. So, it will take much time to get an understanding about it. |
| 2 | 2 | 8 | 3 | 8 | 3 |
| As a lecture I want a comment section, so that I can get to know about my course problems. | **1** | 3 | 2 | 3 | 3 | 5 | 1 | No need to give more time for this because Pramulitha done it before. |
| Libraries (reference books) | As a user I want libraries to help in studies | As a lecture I want libraries that include reference books, so that I can easily upload any course pdfs, Links, and other e-books about my lectures. | **13** | 13 | 8 | 5 | 8 | 8 | 13 | Some decided to give 13 points because it will take much time to find reference books and to analysis them. |
| 13 | 8 | 8 | 13 | 13 | 5 |
| As a student I want libraries that include reference books from my course, so that I can use them for my further knowledge. | **1** | 3 | 5 | 8 | 5 | 8 | 1 | Pramuditha says it can do less time because he did it before. |
| 3 | 3 | 5 | 2 | 5 | 1 |
| As a Student, I want libraries section, so that I can easily download past papers from there. | **8** | 13 | 5 | 8 | 5 | 8 | 5 | There is a code for downloading in sprint 1. So, we can use the same code in here. |
| 8 | 5 | 5 | 5 | 3 | 5 |
| Student counter | As an Admin I want to keep track of the students so that I can take future decisions about this system | As an admin I want to keep a student counter so that I can get acknowledge about the users who are using the system | **8** | 13 | 13 | 8 | 13 | 8 | 13 | Umindu said that he might be able to complete this within this time period. Because he has previous experience. |
| 13 | 8 | 5 | 13 | 8 | 8 |
| 8 | 8 | 5 | 8 | 8 | 8 |
| As a lecturer I want student counter, so that I can get to know about how many students are enrolled for my course | **1** | 2 | 1 | 3 | 1 | 2 | 3 | This was decided by majority. |
| 1 | 1 | 2 | 1 | 1 | 2 |
| As a student I also want student counter so that I can see the count of other colleagues who are enrolled for my course. Then I can get a brief knowledge about that course is good or not. | **2** | 1 | 2 | 2 | 3 | 2 | 1 | Everyone agrees to go with majority without second a thought. |
| Email reminder | As a user I want email reminder so that I will always be notified | As a student, I want email reminder, so that I can verify about my submission. | **8** | 13 | 5 | 13 | 13 | 8 | 13 | Umindu who is implementing this section has a clear knowledge about the function with previous experience. |
| 8 | 13 | 8 | 13 | 8 | 13 |
| As an admin I want email reminder so that I can easily send emails about news and announcements. | **5** | 8 | 8 | 5 | 8 | 5 | 8 | Previous code can be used in here. |
| 5 | 8 | 5 | 5 | 5 | 8 |
| As a student I want email reminder so I can be informed about my assignment deadlines. | **8** | 13 | 5 | 13 | 8 | 5 | 8 | Chamudika and Khema give 13 points because they thought it will take much time to find a source code for measure the time duration. After discussing about this everyone agrees to go with 8 points. |
| 8 | 8 | 8 | 13 | 5 | 13 |
| 8 | 5 | 8 | 5 | 8 | 8 |

**Contribution**

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| --- | --- | --- | --- |
| **Sprint** | **Product Backlog Item** | **Developer** | **QA Engineer** |
| Sprint 1 | * Student Registration * User Login * User Profile | Nagarawaththa N. W. C. R. | D. D. H. Kulathunga |
| * Add, update, and delete courses. * Send a notification when new course is added. * Once a course is added, there should be a separate page for that course to display details related to it. | Hemachandra M. A. J. C. | Pasan W. W. S. R. M. S. |
| * Add, update, and delete course materials * Add assignments for the course. * Provide a link for the students to upload their answers. | Jayasena K. L. K. U. D. | Athukorala A. A. P. S. |
| Sprint 2 | * search courses * follow courses using enrollment key * enrolled course handling | D. D. H. Kulathunga | Nagarawaththa N. W. C. R. |
| * comment section * Q & A * Online reference books (online library) | Athukorala A. A. P. S. | Jayasena K. L. K. U. D. |
| * student counting * email reminder | Pasan W. W. S. R. M. S. | Hemachandra M. A. J. C. |