UNIVERSITY
of
GREENWICH

COMP 1640

Enterprise Web Application Development

Group Members:
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L.H.S.U.S. Abeywardana - 001047070

Contents

1. Introduction

Scrum is a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value. Scrum process is highly flexible and interactive methodology, and always welcome changes. Each sprint is planned to be one week of time. Because of its ideal for in-house development.

Scrum Team

Scrum Master	The sprint backlog, use-case, burndown charts & recording of meeting minutes have been made by our scrum master.
Database Designer	The entity relationship diagram and the database implementation were made by our database designer.
Developers	The entire system was developed by our 3 developers.
Quality Assurance Planner	The test plan & test logs were made by our quality assurance planner.

Table 1

1.1. Team Members and Roles

P.D.A.L. Wickramasinghe - Database Designer/ Developer/ UI Designer
L.H.S.U.S. Abeywardana - Scrum Master/ Product Owner/ Quality Assurance Planner

1.2. URL for group Repository

https://github.com/Avishka97/eTutoring.git

1.3. URL for Site

1.4. URL for Screencast

1.5. Group Member Evaluation

	Weight Factor
Work	
• Punctuality	7
• Completeness	8
• Accuracy	8
Performance as a Team Member	
• Responding to the communication	6
• Collaboration	7
• Physical Attendance	9

Table 1.2 Weight Factors

2. Background

The course work required to build a web-based secure role-based system for eTutoring in a large university. Our web application, provide a facility for the student to upload articles, blogging, messaging with the tutor. Also the tutor can collaborate with student through our website both parties can arrange meeting from our website and they can record it. The system has 3 user roles. Admin, Student and the tutor. The system will generate reports from past statistics such as no of message with the tutor, Average number of messages for each personal tutor.

3. The Requirements

- All students must have a personal tutor.
- Any authorised member of staff can allocate or reallocate personal tutors to students. The student and the personal tutors will get notification emails when this happens.
- Bulk allocation of students to their personal tutor (e.g. 10 at a time) needs to be implemented.
- All students and their tutors are to use the eTutor system for messaging, arranging and recording meetings (both real and virtual), uploading documents and commenting on them, and for blogging.
- Email between students and their personal tutors is to be used only for notification of events recorded in the backend database. No other content is to be sent via email.
- Student and staff data is accessed from the university MIS system. The maintenance of this is outside the scope of this project.
- Each student will have their own personal dashboard summarising their interaction with their personal tutor.
- Each personal tutor will have a dashboard of their personal tutees that can be sorted and filtered appropriately
- Authorised staff will have access to the dashboards of other staff, and to individual dashboards for students.
- The interface must be suitable for all devices (e.g. mobile phones, tablets, desktops)
- Reports:-
    - Statistics
        - Number of messages in last 7 days
        - Average number of messages for each personal tutor
    - Exception reports
        - Students without a personal tutor.
        - Students with no interaction for 7 days and 28 days.

4. Database Design and Implementation

4.1. ER Diagram and assumptions

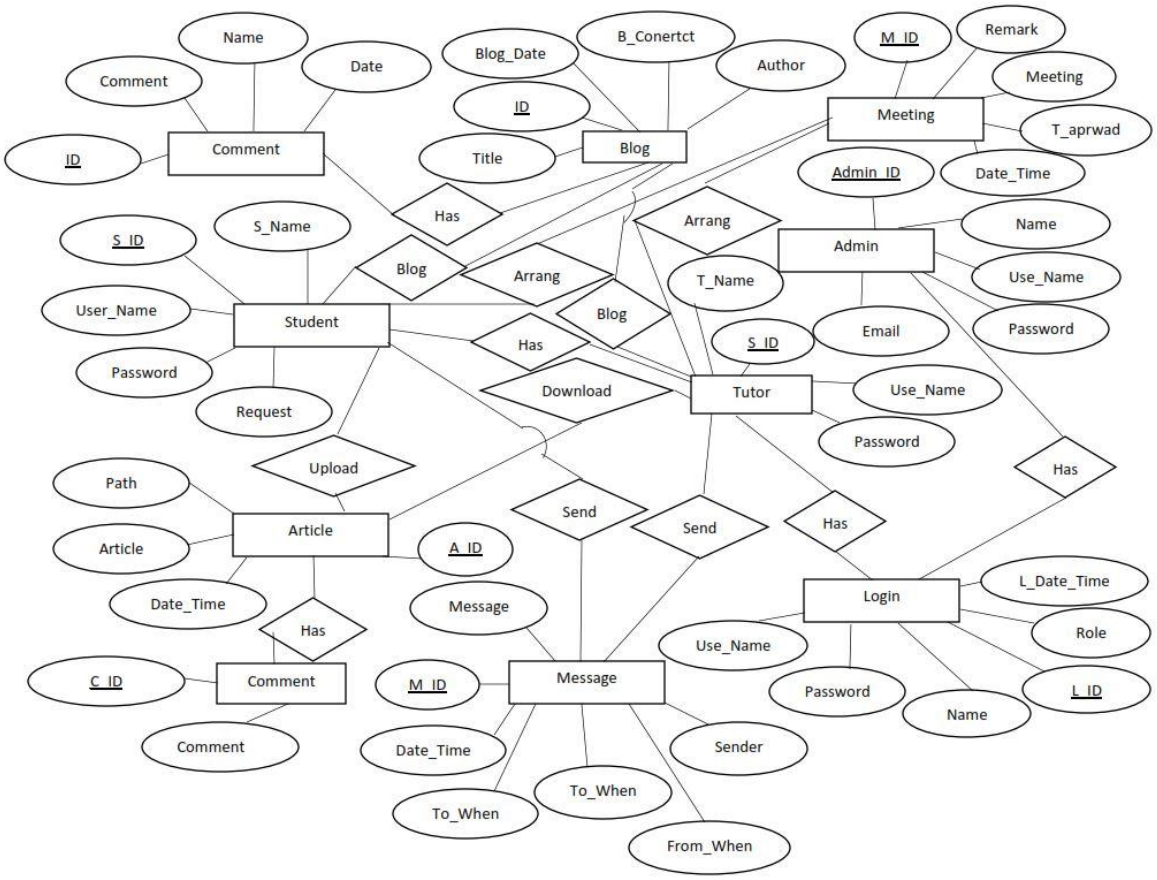


Figure 4.1ER Diagram

4.2 Normalization

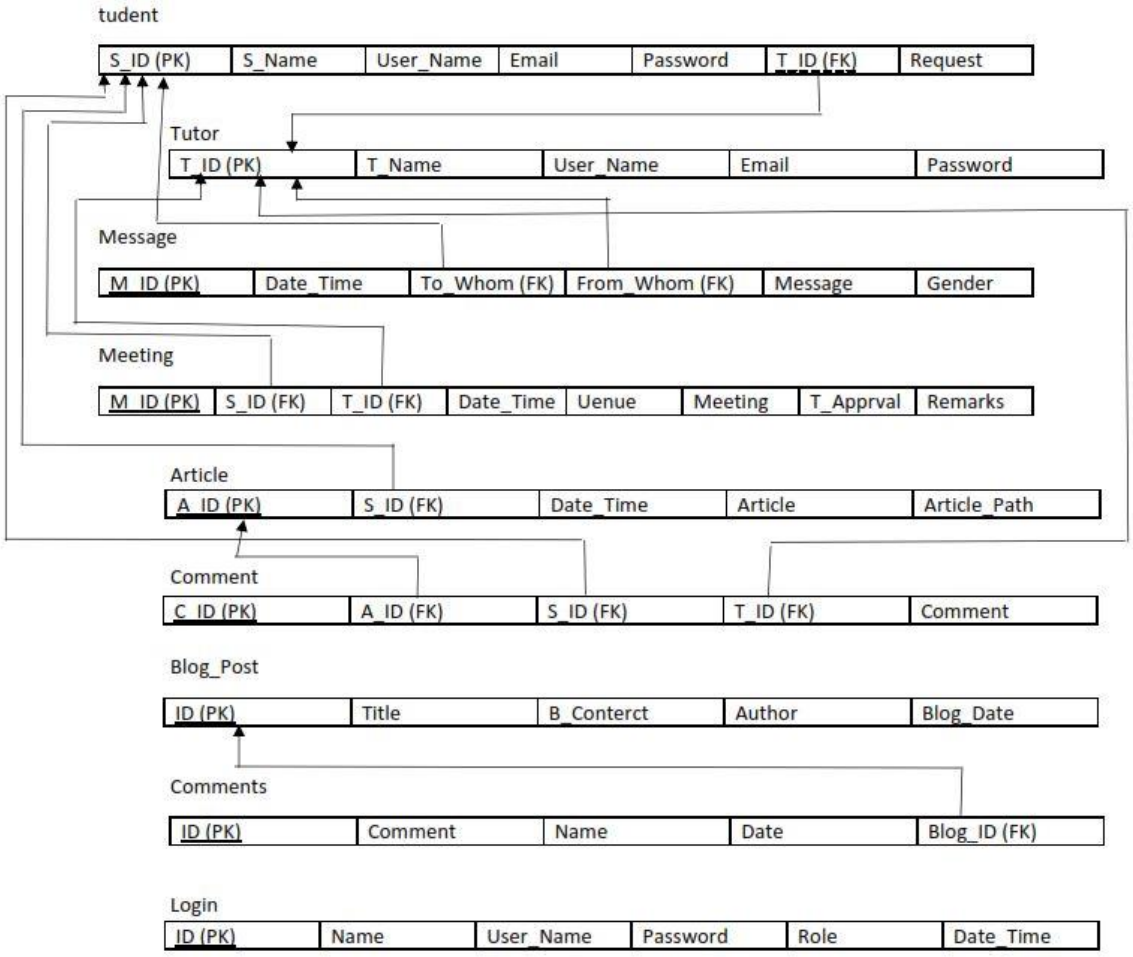


Figure 4.2Normalization Table

5. Site Design and Implementation

5.1. Use Case Diagram

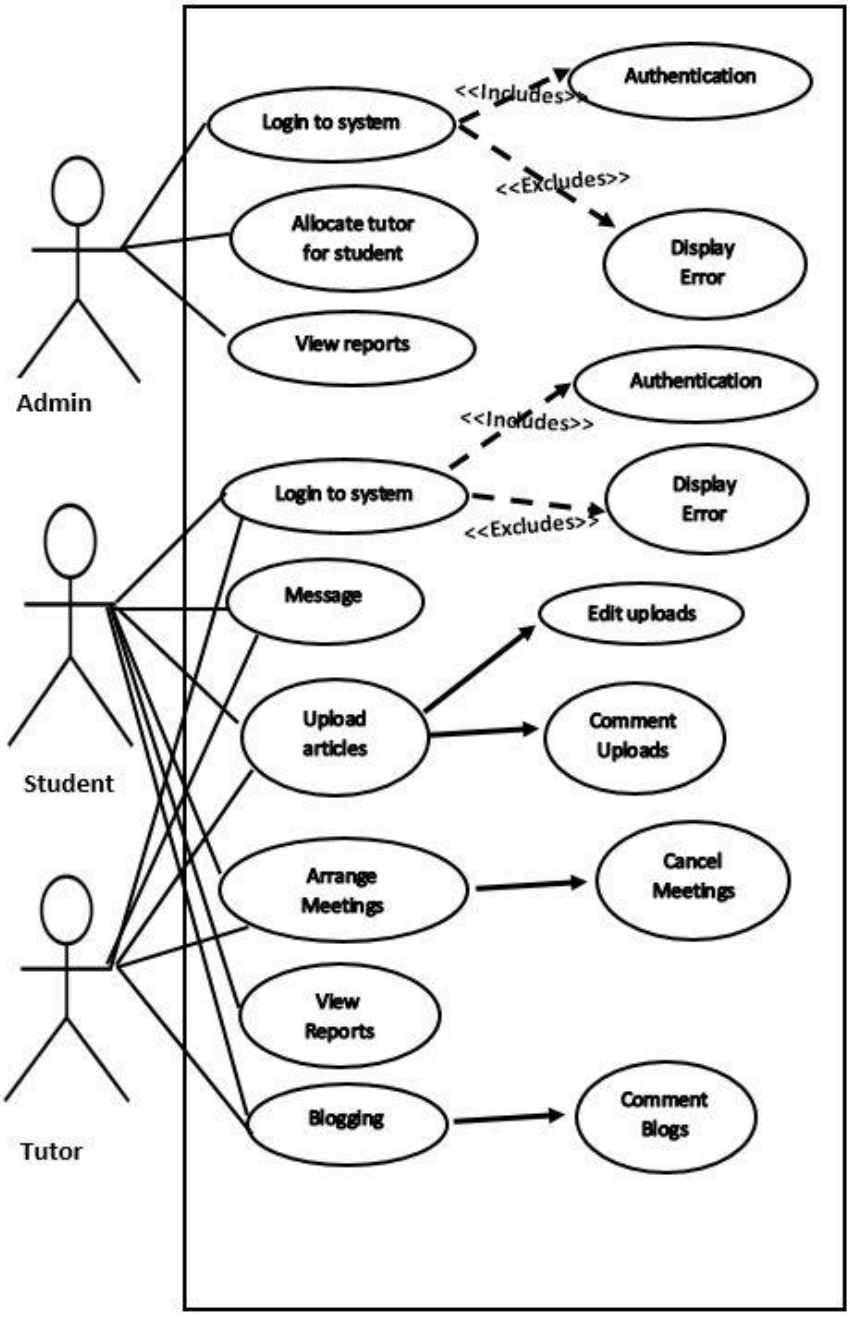


Figure 5 Use Case Diagram

5.2. UI Design

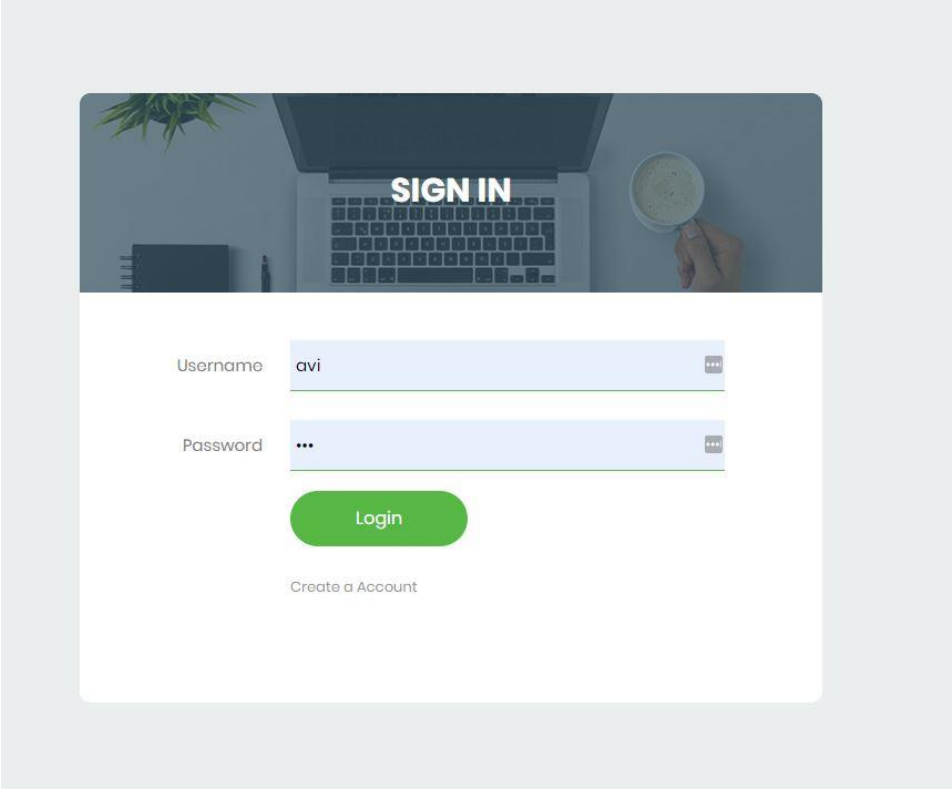


Figure 5.1 Login Page

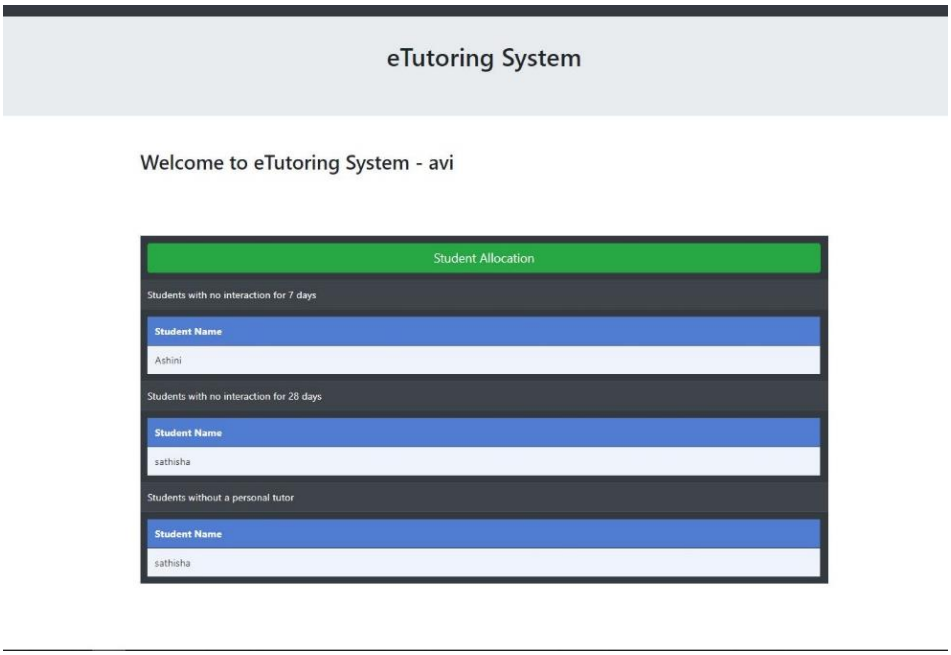


Figure 5.2 Admin Panel

Figure 5.3 Tutor Allocation

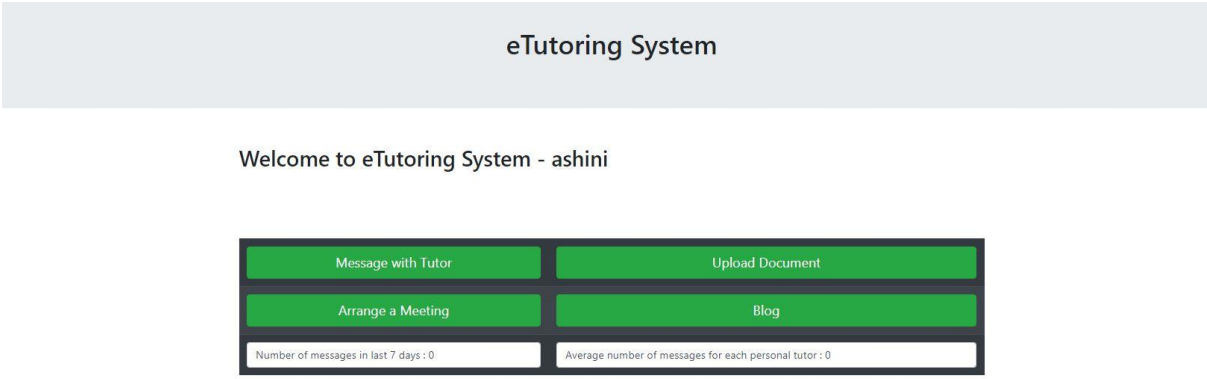


Figure 5.4 Student Panel

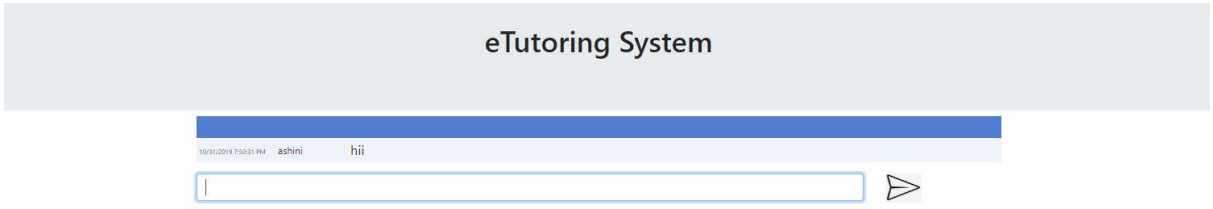


Figure 5.5 Message with Student

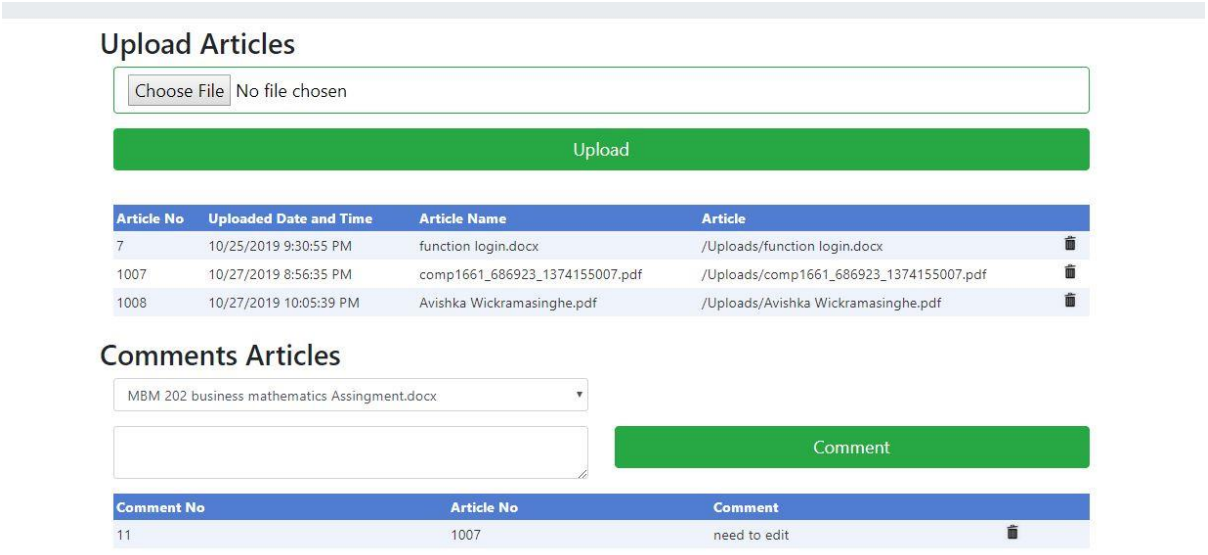


Figure 5.6 Upload articles page for student

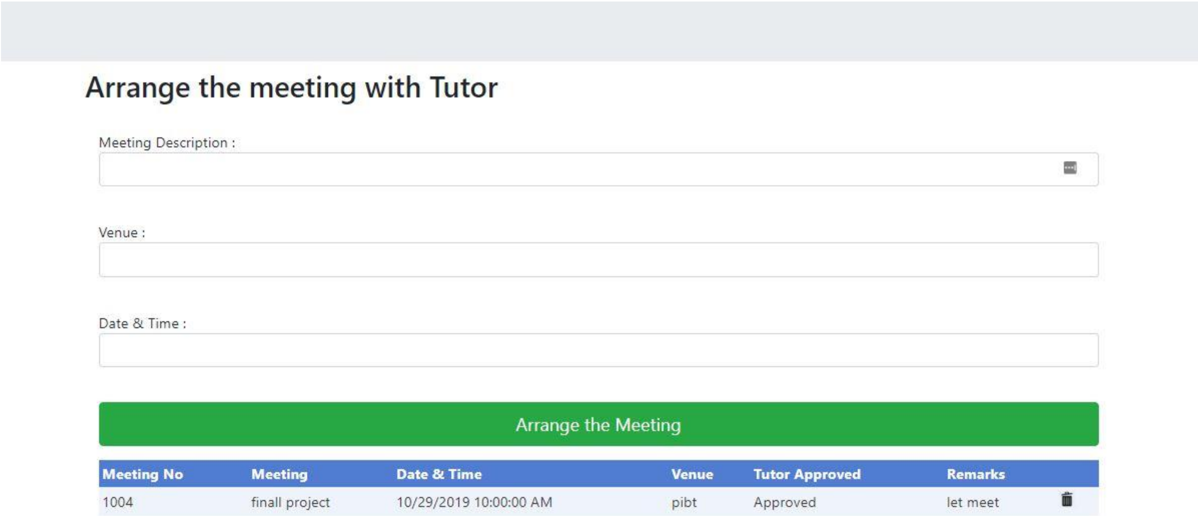
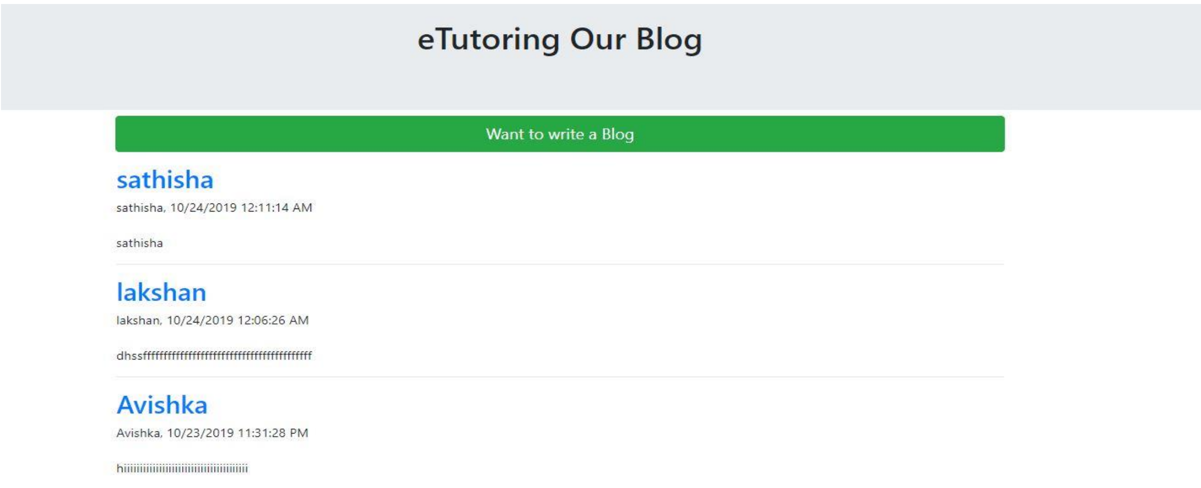


Figure 5.7 Arrange meeting with tutor



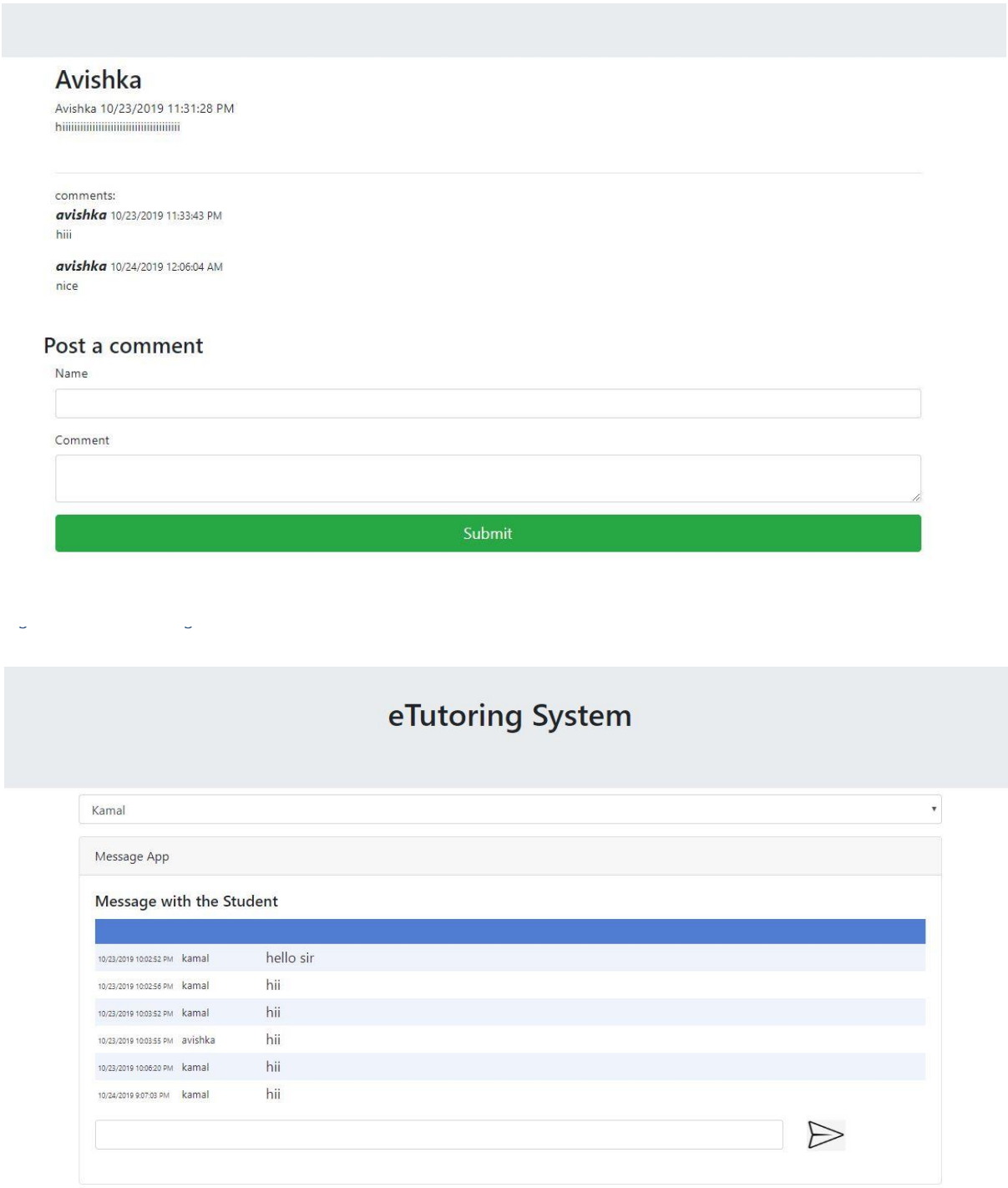


Figure 5.10 Tutor Page - Messaging part

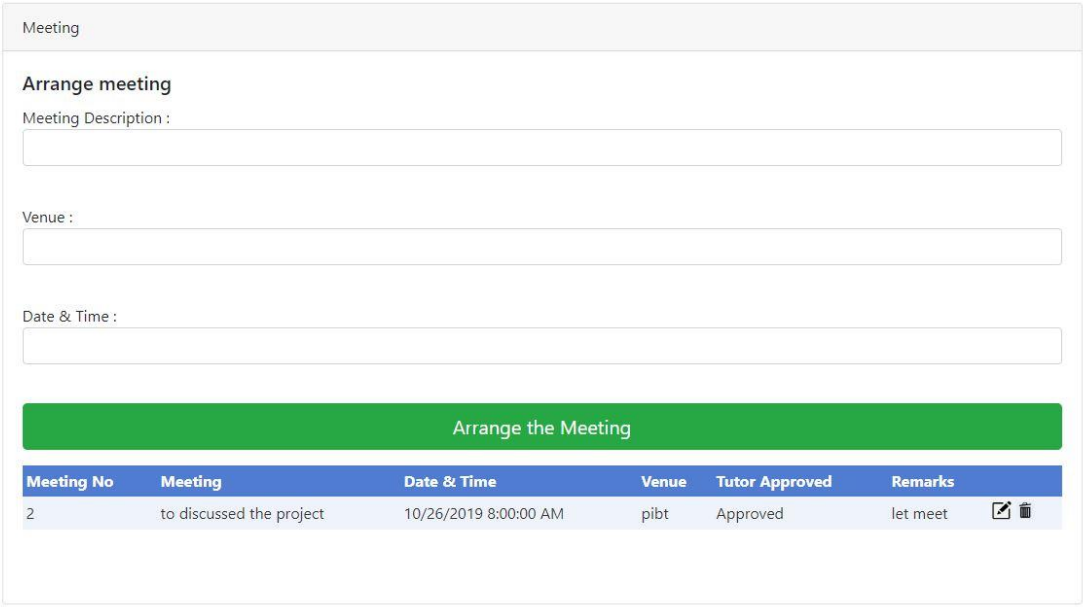


Figure 5.11 Tutor Page - Arrange Meeting part

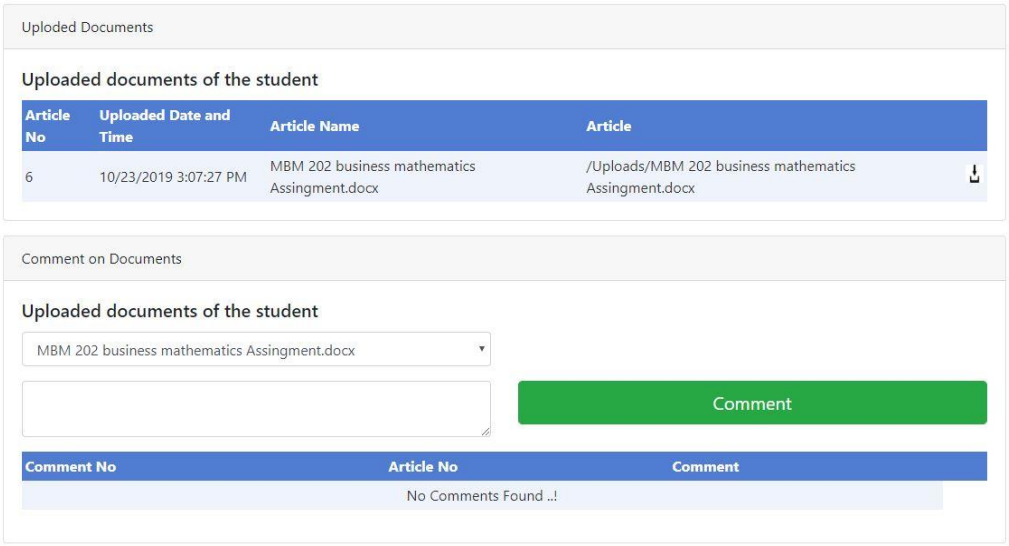


Figure 5.12 Tutor Page - Article part

6. Testing Methodology

6.1. Test Plan

Test case #ID	Test Title	Test scenarios	User logins used for testing	Expected result
01	Verify the user registration for user login.	(a) Enter completed details with Sign Up. (b) Enter incomplete details with Sign Up.	Student Tutor Admin	User should be able to see welcome message and user should be able to see login page. (Successfully Registration)
02	Verify the login functionality of login page.	(a)Enter a valid and user name and password for login to the system. (b) Enter an invalid and user name and wrong password for login to the system.	Student Tutor Admin	System should be able to accept valid password then user should be able to see available functions. As well as system should be able to reject invalid password. And system should be able to show error message.
03	Verify the user role for login the page.	Login into the system using the different main level of job roles (2). 1.Student 2. Tutor	Student Tutor Admin Tutor	System should be able to give access to different main level user roles logins (2).
04	Verify student logins.	(a)Access to login the system using student login.	Student Admin	System should be able to accept valid student logins and access to documents & massages.
05	Verify student logins with ability to arrange meetings with tutor	(a) Access to login the system using student login. (b) Arranging	Student Admin	System should be able to manage (a) & (b) from each student login.

		meetings from the same student login.		
06	Verify student logins with ability to upload Documents / Articles.	(a) Access to login the system using student login. (b)Uploading the documents / Articles within text from the same student login.	Student Admin Student Admin	System should be able to accept upload documents / Articles within text.
07	Verify massaging with tutor and student	(a) Access to login the system using student login. (b) Ability to send e mails or massages to tutor and or student.	Student Admin	The system should be able to provide the requested facilities
08	Verify facility for blog	(a) Access to login the system using student login for blog	Student Admin	User should be able to use the facility for blog
09	Verify massages with tutor by student	Number of massages communicated with tutor within last 7 days	Student Tutor Admin	User should be able to see number of massages communicated
10	Verify status of meeting arranged with tutor	Details of meeting arranged	Student Tutor Admin	User should be able to see the meetings arranged with the tutor
11 **12**	Verify information of meetings arranged by the student is communicated to the tutor Verify to see	The tutor should be able to see the meetings arranged by each student The tutor should be able to see his students allocated	Student Tutor Admin	The tutor should provide detail information on meetings arranged by students The tutor should provide names of allocated students

	the system provides names of allocated students to tutor			
13	Verify status of uploaded documents by the students	The tutor should be able to see the documents uploaded	Tutor Admin	The tutor should provide information of uploaded documents by the students
14	Verify system facility for comments on documents uploaded	The tutor should be able to make comments on the documents uploaded	Tutor Admin	Provisions should be given to the tutor on same
15	Verify status on communicati on made by tutor	The student should be able to receive comments made by tutor	Student Admin	The system should provide student a facility to see the comments made by tutor

6.2. Test Log

Test case #ID	Test Title	Test scenarios	Expected result	Actual Result	Tested Date	Pass/ Fail/Expected/ Not Expected	Action Taken
01	Verify the user registration for user login.	(a) Enter completed details with Sign Up. (b) Enter incomplete details with Sign Up.	User should be able to see welcome message and user should be able to see login page. (Successfully Registration)	(a)System accepted correct data with complete details. (b)System rejected incorrect data with incomplete details.	28 Oct 2019	Pass	
02	Verify the login functionality of login page.	(a)Enter a valid and user name and password for login to the system. (b) Enter an invalid and user name and wrong password for login to the system.	System should be able to accept valid password then user should be able to see available functions. As well as system should be able to reject invalid password. And system should be able to show error message.	(a)System accepted valid and correct username and password. (a)System rejected invalid and incorrect username and password.(error message)	28 Oct 2019	Pass	
03	Verify the user role for login the page.	Login into the system using the different main level of job roles (2). 1.Student 2. Tutor	System should be able to give access to different main level user roles logins (2).	System accepted all the different levels of user roles.	28 Oct 2019	Pass	
04	Verify student logins.	(a)Access to login the system using student login.	System should be able to accept valid student logins and access to documents & massages.	System accepted valid student logins to manage them	28 Oct 2019	Pass	

05	Verify student logins with ability to arrange meetings with tutor	(a) Access to login the system using student login. (b) Arranging meetings from the same student login.	System should be able to manage (a) & (b) from each student login.	System accepted valid student logins to manage them.	28 Oct 2019	Pass	
06	Verify student logins with ability to upload Documents / Articles.	(a) Access to login the system using student login. (b)Uploadin g the documents / Articles within text from the same student login.	System should be able to accept upload documents / Articles within text.	System accepted valid student logins to upload documents / Articles.	29 Oct 2019	Pass	
07	Verify massaging with tutor and student	(a) Access to login the system using student login. (b) Ability to send e mails or massages to tutor and or student.	The system should be able to provide the requested facilities	The system provides the facility for both the Tutor and the Student	29 Oct 2019	failed	Correct ed
08	Verify facility for blog	(a) Access to login the system using student login for blog	User should be able to use the facility for blog	The system provides the facility	29 Oct 2019	Pass	
09	Verify	Number of	User should	The system provides	29	Pass	

	massages with tutor by student	massages communicated with tutor within last 7 days	be able to see number of massages communicated	number of massages communicated with the tutor	Oct 2019		
10	Verify status of meeting arranged with tutor	Details of meeting arranged	User should be able to see the meetings arranged with the tutor	The system provides the information of meetings arranged	29 Oct 2019	Pass	
11	Verify information of meetings arranged by the student is communicated to the tutor	The tutor should be able to see the meetings arranged by each student	The tutor should provide detail information on meetings arranged by students	The system provides the required information on the meetings of each student	29 Oct 2019	Pass	
12	Verify to see the system provides names of allocated students to tutor	The tutor should be able to see his students allocated	The tutor should provide names of allocated students	The system provides the names of allocated students to the tutor	29 Oct 2019	Pass	
13	Verify status of uploaded documents by the students	The tutor should be able to see the documents uploaded	The tutor should provide information of uploaded documents by the students	The system provides the information of uploaded documents	29 Oct 2019	Pass	
14	Verify system facility for comments on documents uploaded	The tutor should be able to make comments on the documents uploaded	Provisions should be given to the tutor on same	The system provides the provisions and facility for comments by the tutor	29 Oct 2019	Pass	
15	Verify status on communication made by tutor	The student should be able to receive comments made by tutor	The system should provide student a facility to see the comments made by tutor	The system provides the student the facility to see the comments made by the tutor	29 Oct 2019	Pass	

7. Agile Methodology

7.1. User Stories

ID	User	User Story
01	Admin	As an Admin, I need to sign in to my account, So that I can communicate with my tutor.
02	Admin	As an Admin, I want to allocate tutors for students, So that they can communicate
03	A Student	As a Student, I need to sign in to my account, So that I can communicate with my tutor.
04	A Student	As a Student, I need to message with my tutor, So that I can communicate with my tutor.
05	A Student	As a Student, I need to Upload documents, So that I can show my documents to my tutor.
06	A student	As a student, I need to see my uploads, So that I can comment on it.
07	A student	As a student, I need to delete my uploads, So that I can re-edit and upload it.
08	A student	As a student, I need to delete my comments, So that I can re-comment on it.
09	A student	As a Student, I need to arrange meetings and record meeting, So that I can manage the meetings.
10	A student	As a Student, I need to cancel meetings, So that I can change the meetings.
11	A Tutor	As a Tutor, I need to sign in to my account, So that I can communicate with my students.
12	A Tutor	As a Tutor, I need to message with my Student, So that I can communicate with my student.
13	A Tutor	As a Tutor, I need to download uploaded documents, So that I can see the documents.

14	A Tutor	As a Tutor, I need to see students uploaded documents, So that I can comment on it.
15	A Tutor	As a Tutor, I need to delete my comments, So that I can re-comment on it.
16	A Tutor	As a Tutor, I need blogging, So that I can share my thoughts with others.
17	A Student	As a Student, I need blogging, So that I can share my thoughts with others.
18	An Admin	As an Admin, I have access to the dashboard of staff and students, So that I can help to both parties.
19	A Student	As a Student, I want to know the number of messages in last 7 days, So that I can get an idea about how I communicate with my Tutor
20	A Tutor	As a Tutor, I want to know the number of messages in last 7 days, So that I can get an idea about how I communicate with my Student
21	A Student	As a Student, I want to know the average number of messages for each personal tutor, So that I can get an idea about how I communicate with my Tutor
22	An Admin	As an Admin, I want to know students that doesn't have a personal tutor, So that I can appoint a tutor
23	An Admin	As an Admin, I want to know students with no interaction for 7 days and 28 days, So that I can give feedbacks.
24	A Tutor	As a Tutor, I need to arrange meetings and record meeting, So that I can manage the meetings.
25	A Student	As a Student, I need to request a tutor, So that I can communicate with tutor
26	Users	As a User, I need a secure website, so that I can share everything
27	User	As a User, I need to store all related things, So that I can retrieve easily.

7.2. Product Backlog

ID	Requirement	Story ID	Feature	Priority
01	A database should be design to store all the records	27	Database design	01
02	All users should have separate logins to their accounts	01	Login Interface	02
03	Implement secure data transfer via encrypted channel using SSL	26	Secure data transfer channel	03
04	Student can see their home page	03	Student Home Page	04
05	Student should able to upload, delete his uploads and comments added	05 06 07 08	Student Upload Page	06
06	Student should message with their tutor.	04	Student Message Page	07
07	Students should able to arrange Meetings and cancel meeting	09 10	Student Meeting Page	08
08	Student should have to blog	17	Blogging Page	09
09	Tutor can select and filter with the student	11	Tutor Page	10
10	Tutor should message with their student.	12	Tutor Page	11
11	Tutor should able to view, delete his uploads and comments added	13 14 15	Tutor Page	12

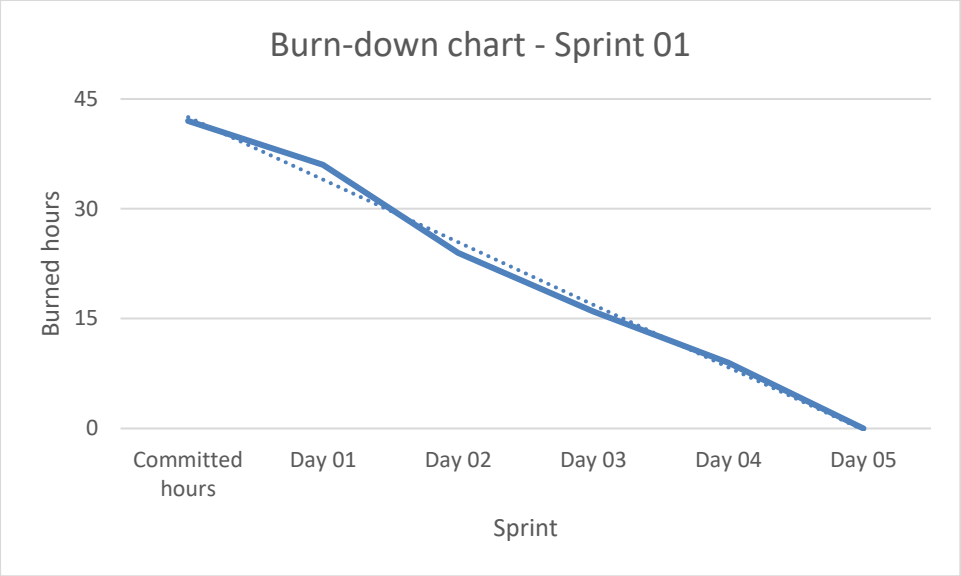
12	Tutor should able to arrange Meetings and cancel meeting	24	Tutor Page	13
13	System should able generate statistical reports including	19 20 21 22 23	Reports generation	16
14	Admin have access to dashboards of students and staff	18	Admin Page	15
15	Admin can allocate tutors to students	02	Student allocation page	17
16	Student can request a tutor	25	Student Request page	05
17	Tutor should have to blog	16	Blog Page	14

7.3. Sprint 1

7.3.1. Sprint Backlog

Task No	Description	Name	Role	Committed hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Requirement clarification of web application with team	Savani	Product owner	6	5	5	2	2	0	0
2	Discussion of Product backlog items with Scrum master	Savani	Product owner	2	2	0	0	0	0	0
3	Verification of Product backlog items	Savani	Product owner	1	1	1	1	0	0	0
4	Preparation of product backlog	Savani	Scrum master	2	2	2	2	2	0	0
5	Requirement clarification for login screen	Savani	Scrum master	1	1	1	0	0	0	0
6	Discussion on test plane and test schedule with QA	Savani	Scrum master	4	3	2	2	0	0	0
7	Prepare test plans	Savani	QA	3	3	3	2	2	0	0
8	Prepare test schedules	Savani	QA	2	2	2	2	0	0	0
9	Prepare conceptual & logical designs of Database	Avishka	Database designer	3	2	1	1	1	0	0
10	Discussion of database design with scrum master	Avishka	Database designer	1	1	1	0	0	0	0
11	Develop the physical database for the prerared design	Avishka	Database designer	2	2	0	0	0	0	0
12	Login form back-end programming	Avishka	Programmer1	5	5	3	3	2	0	0
13	Discussion of login process with database designer	Avishka	Programmer1	1	1	1	1	0	0	0
14	Setup database connectivity with login	Avishka	Programmer1	1	1	0	0	0	0	0
15	Discussion of security features to be included in login with scrum master	Avishka	Programmer1	1	0	0	0	0	0	0
16	Discussion of security features to be included in login with database designer	Avishka	Programmer1	1	1	0	0	0	0	0
17	Implementing required security features on login	Avishka	Programmer1	2	2	2	0	0	0	0
18	Login screen layout design	Avishka	Programmer1	1	1	0	0	0	0	0
19	Login screen UI design	Avishka	Programmer1	3	1	0	0	0	0	0

7.3.2. Burn Down Chart



7.3.3. Meeting Minutes

Sprint start date: 26th of August 2019
Sprint end date: 01st of September 2019
Venue: PIBT
Participants: Avishka
Savani

Meeting Minutes:

Discussed user stories and turn them into regular items. Divided among the agile team. According to the product, the backlog team decided the estimated time for each and every item, planned to finish all the items in product backlog within 10 sprints. All the members are agreed to work 3hrs per day and 7 days per week. According to that 2 members may complete 42hrs per week.

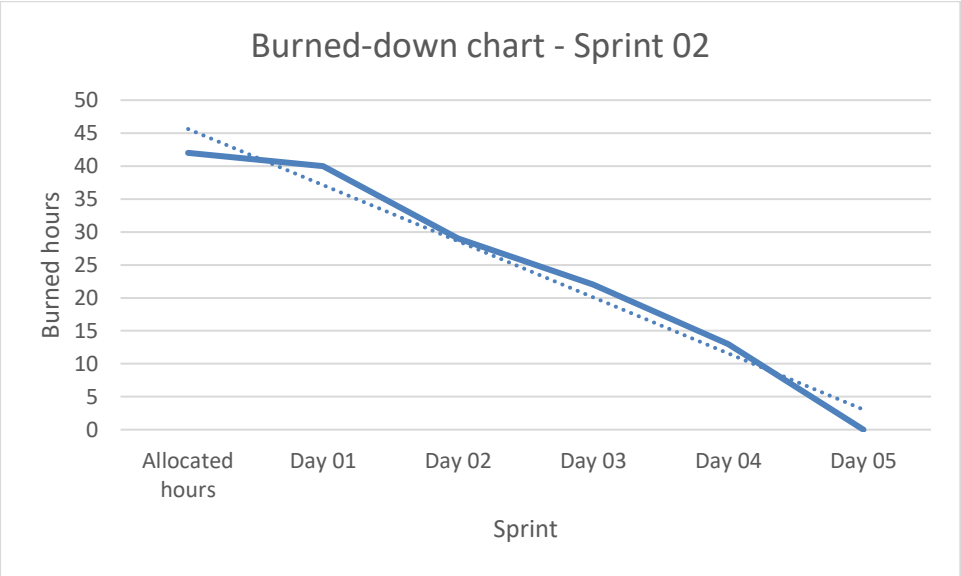
7.4. Sprint 2

7.4.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	2	2	2	0	0	0	0
2	Verification of test results with QA	Savani	Product owner	1	1	1	1	1	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	2	2	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	3	0	0	0	0	0
5	Discussion and finalizing the features and layout of login screen	Savani	Scrum master	1	1	1	1	0	0	0
6	Discussion on test results and required changes of login with developers & QA	Savani	Scrum master	2	2	2	2	2	0	0
7	Prepare test cases for test Student Home & Message App	Savani	QA	2	2	2	0	0	0	0
8	Test the Student Home & Message App using advocate test cases	Savani	QA	5	5	5	3	3	0	0
9	Documenting test results	Savani	QA	2	2	2	2	2	0	0
10	Design the table to Student Home & message app	Avishka	Database designer	2	2	2	2	0	0	0
11	Implement SQL functions related to Student Home & message app	Avishka	Database designer	3	3	3	3	3	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	2	2	0	0	0	0	0
13	Implement the UI design for Student Home	Avishka	Programmer1	2	2	2	2	0	0	0
14	Implement the UI design for Student Message App	Avishka	Programmer1	2	0	0	0	0	0	0
15	Backend code for Student home	Avishka	Programmer1	3	3	1	0	0	0	0
16	Backend code for Message app	Avishka	Programmer1	3	3	0	0	0	0	0
17	Testing the Student Home	Avishka	Programmer1	2	2	2	2	2	0	0

18	Testing the Student Message app	Avishka	Programmer1	2	2	2	2	0	0	0

7.4.2. Burn Down Chart



7.4.3. Meeting Minutes

Sprint start date: 02nd of September 2019
Sprint end date: 08th of September 2019
Venue: PIBT
Participants: Avishka
Savani

Meeting Minutes:
Discussed drawbacks of the first sprint and all the members understood that we need to move a little bit fast to achieve the goal within the given limited time period. The development has started with user Login page, Student home page with messaging facility and ready to move to the testing from next sprint.

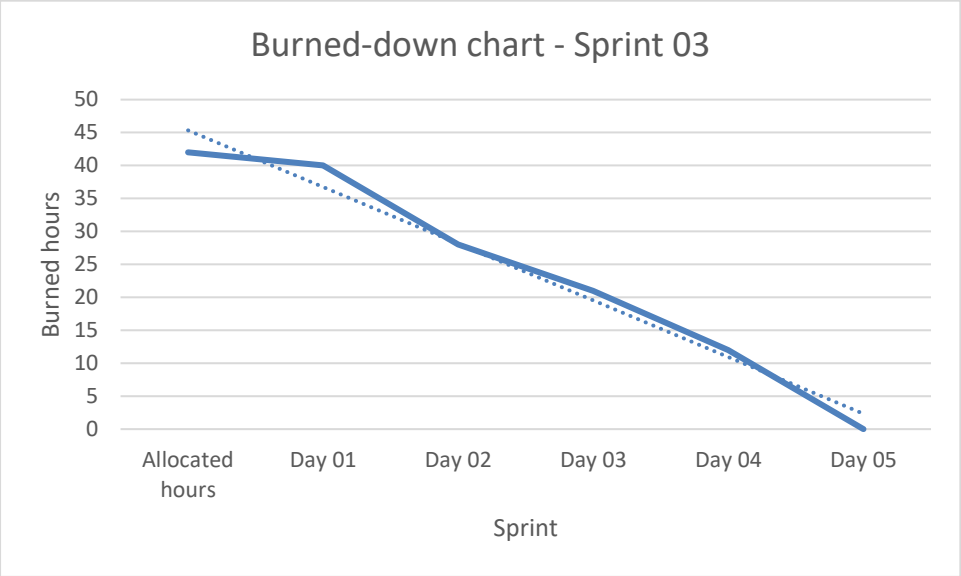
7.5. Sprint 3

7.5.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	1	1	1	1	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	2	0	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	2	2	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	3	0	0	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	2	2	1	1	0	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	2	0	0
7	Prepare test cases for test Student Upload documents & Meeting page	Savani	QA	2	2	2	0	0	0	0
8	Test the Upload documents & Meeting page using advocate test cases	Savani	QA	5	5	5	3	3	0	0
9	Documenting test results	Savani	QA	2	2	2	2	2	0	0
10	Design the table to Upload documents & Meeting page	Avishka	Database designer	2	2	2	2	0	0	0
11	Implement SQL functions related to Upload documents & Meeting page	Avishka	Database designer	3	3	3	3	3	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	2	2	0	0	0	0	0
13	Implement the UI design for Upload documents	Avishka	Programmer1	2	2	2	2	0	0	0
14	Implement the UI design for Meeting page	Avishka	Programmer1	2	0	0	0	0	0	0
15	Backend code for Upload documents	Avishka	Programmer1	3	3	1	0	0	0	0
16	Backend code for Meeting page	Avishka	Programmer1	3	3	0	0	0	0	0

17	Testing the Upload documents	Avishka	Programmer1	2	2	2	2	2	0	0
18	Testing the Meeting page	Avishka	Programmer1	2	2	2	2	0	0	0

7.5.2. Burn Down Chart



7.5.3. Meeting Minutes

Sprint start date: 09th of September 2019
Sprint end date: 15th of September 2019
Venue: PIBT
Participants: Avishka
Savani

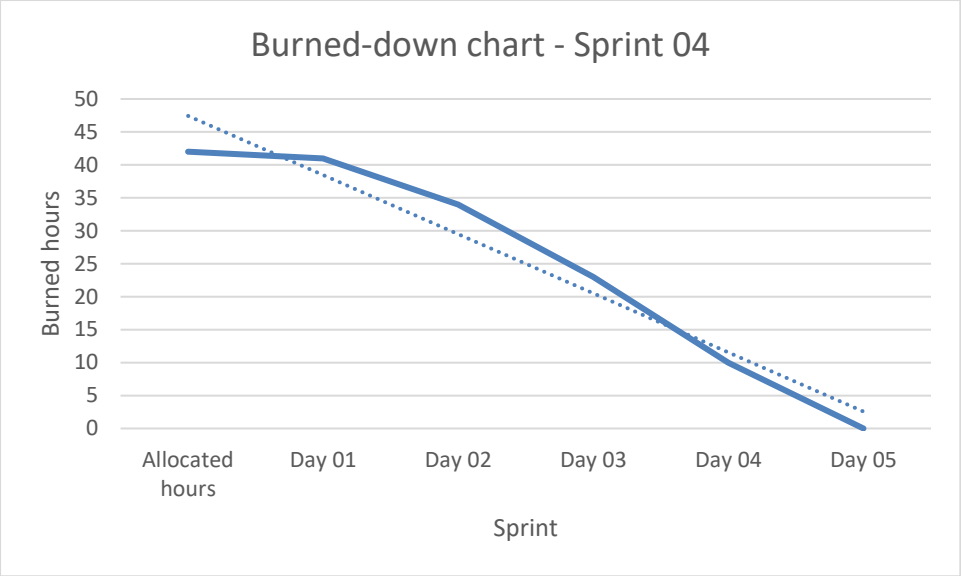
Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. UI Design for upload documents and Meeting page screen was discussed and developed. Testing the upload documents and Meeting page functions & UI.

7.6. Sprint 4

7.6.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	3	3	3	2	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	2	2	2	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	1	1	0	0	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	2	2	0	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	1	1	1	1	1	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	0	0	0
7	Prepare test cases for test Student Blogging	Savani	QA	3	3	2	2	2	0	0
8	Test the Blogging page using advocate test cases	Savani	QA	4	4	4	3	2	0	0
9	Documenting test results	Savani	QA	2	2	2	2	0	0	0
10	Design the table to Upload Blogging page	Avishka	Database designer	3	3	2	1	0	0	0
11	Implement SQL functions related toBlogging page	Avishka	Database designer	5	5	4	3	1	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	3	3	1	0	0	0	0
13	Implement the UI design for Blogging page	Avishka	Programmer1	4	4	3	1	0	0	0
14	Backend code for Blogging page	Avishka	Programmer1	3	3	3	2	1	0	0
15	Testing the Blogging page	Avishka	Programmer1	3	3	3	2	0	0	0

7.6.2. Burn Down Chart



7.6.3. Meeting Minutes

Sprint start date: 16th of September 2019
Sprint end date: 22nd of September 2019
Venue: PIBT
Participants: Avishka
Savani

Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Fixed the reported bugs of document upload page functions. UI Design for Blogging page screen was discussed and designed it.

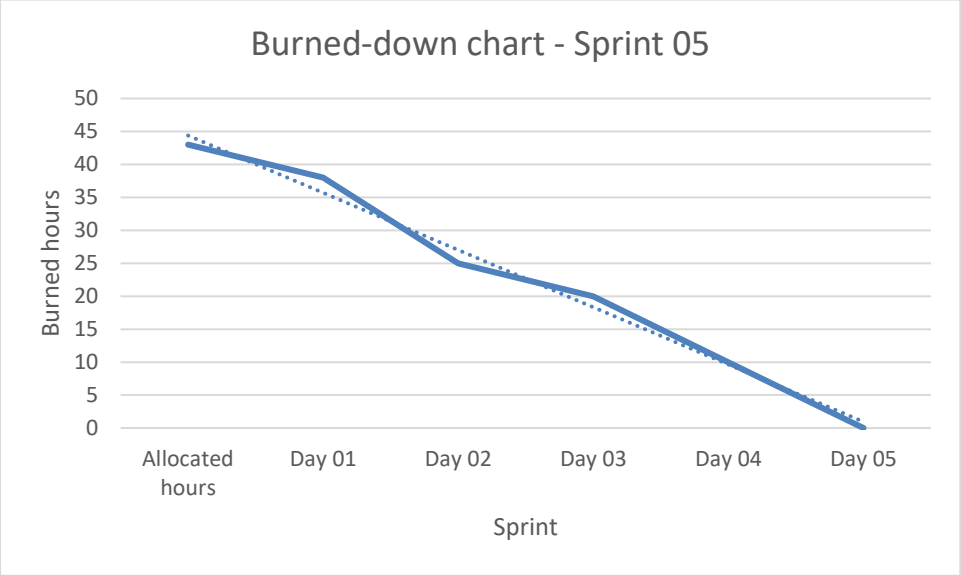
7.7. Sprint 5

7.7.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	1	0	0	0	0	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	2	0	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	2	2	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	3	0	0	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	2	0	0	0	0	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	2	0	0
7	Prepare test cases for test Tutor page & Tutor message page	Savani	QA	2	2	2	2	0	0	0
8	Test the Tutor page & Tutor message page using advocate test cases	Savani	QA	5	5	5	3	3	0	0
9	Documenting test results	Savani	QA	2	2	2	2	2	0	0
10	Design the table toTutor page & Tutor message page	Avishka	Database designer	2	2	2	2	0	0	0
11	Implement SQL functions related to Tutor page & Tutor message page	Avishka	Database designer	3	3	3	3	3	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	2	2	0	0	0	0	0
13	Implement the UI design for Tutor Page	Avishka	Programmer1	2	2	2	2	0	0	0
14	Implement the UI design for Tutor Message page	Avishka	Programmer1	2	0	0	0	0	0	0
15	Backend code for Tutor Page	Avishka	Programmer1	3	3	1	0	0	0	0
16	Backend code for Tutor Message page	Avishka	Programmer1	3	3	0	0	0	0	0

17	Testing theTutor Page	Avishka	Programmer1	2	2	0	0	0	0	0
18	Testing the Tutor Message page	Avishka	Programmer1	2	2	2	2	0	0	0

7.7.2. Burn Down Chart



7.7.3. Meeting Minutes

Sprint start date: 23rd of September 2019
Sprint end date: 29th of September 2019
Venue: PIBT
Participants: Avishka
Savani

Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Relevant test cases and test plans were introduced. Tutor page & Tutor message page section development was taken into a discussion and came up with few modifications.

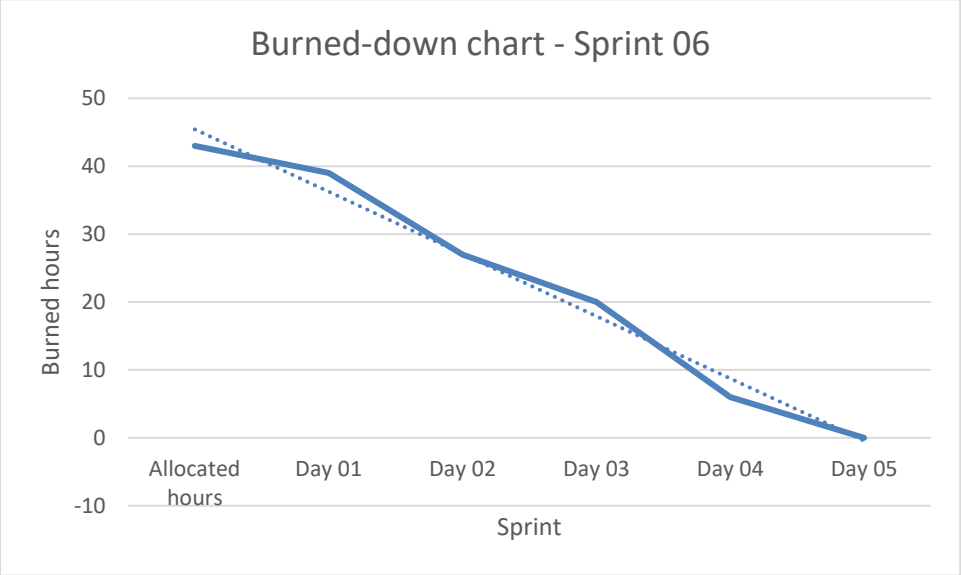
7.8. Sprint 6

7.8.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	1	0	0	0	0	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	2	2	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	2	1	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	3	3	2	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	2	1	1	1	1	0	
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	0	0	0	
7	Prepare test cases for test tutor uploaded documents & tutor Meeting page	Savani	QA	2	2	2	2	2	0	0
8	tutor uploaded documents & tutor Meeting page using advocate test cases	Savani	QA	5	5	5	3	0	0	0
9	Documenting test results	Savani	QA	2	2	1	1	1	0	0
10	Design the table to tutor uploaded documents & tutor Meeting page	Avishka	Database designer	2	2	2	2	0	0	0
11	Implement SQL functions related to tutor uploaded documents & tutor Meeting page	Avishka	Database designer	3	3	2	2	2	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	2	2	0	0	0	0	0
13	Implement the UI design for Tutor Upload page	Avishka	Programmer1	2	2	2	2	0	0	
14	Implement the UI design for Tutor Meeting page	Avishka	Programmer1	2	0	0	0	0	0	

15	Backend code for Tutor Uploaded Page	Avishka	Programmer1	3	3	1	0	0	0	0
16	Backend code for Tutor Meeting page	Avishka	Programmer1	3	3	0	0	0	0	0
17	Testing the Tutor Uploaded Page	Avishka	Programmer1	2	2	0	0	0	0	
18	Testing the Tutor Meeting page	Avishka	Programmer1	2	2	2	2	0	0	0

7.8.2. Burn Down Chart



7.8.3. Meeting Minutes

Sprint start date: 30th of September 2019
Sprint end date: 6th of October 2019
Venue: PIBT
Participants: Avishka
Savani

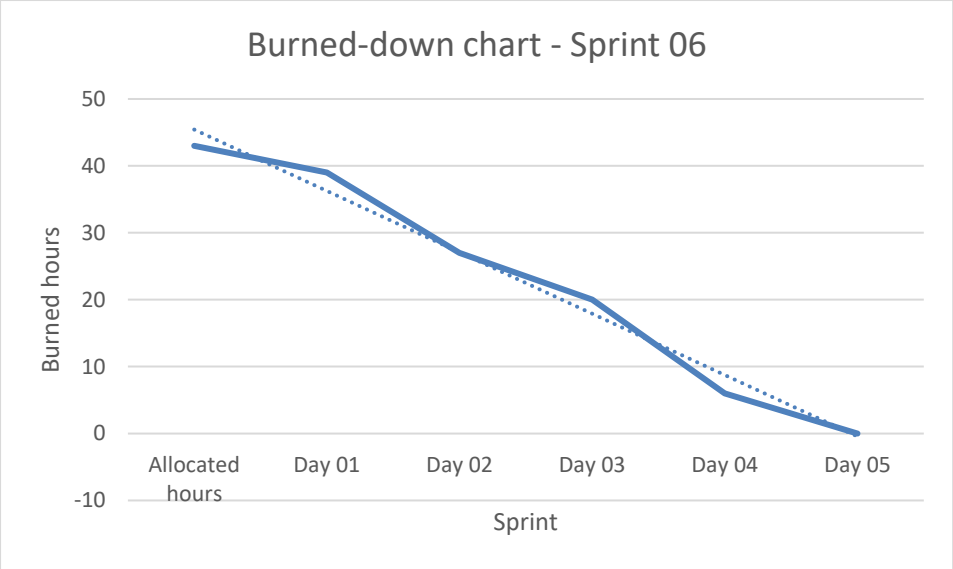
Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Tutor downloaded the students upload functions will be given to a QA manager.

7.9. Sprint 7

7.9.1. Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	3	3	3	2	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	2	2	2	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	1	1	0	0	0	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	2	2	0	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	1	1	1	1	1	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	0	0	0
7	Prepare test cases for test Statistical Reports	Savani	QA	3	3	2	2	2	0	0
8	Test the Statistical Reports using advocate test cases	Savani	QA	4	4	4	3	2	0	0
9	Documenting test results	Savani	QA	2	2	2	2	0	0	0
10	Design the table to Statistical Reports	Avishka	Database designer	3	3	2	1	0	0	0
11	Implement SQL functions related to Statistical Reports	Avishka	Database designer	5	5	4	3	1	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	3	3	1	0	0	0	0
13	Implement the UI design for Statistical Reports	Avishka	Programmer1	4	4	3	1	0	0	0
14	Backend code for Statistical Reports	Avishka	Programmer1	3	3	3	2	1	0	0
15	Testing the Statistical Reports	Avishka	Programmer1	3	3	3	2	0	0	0

7.9.2. Burn Down Chart



7.9.3. Meeting Minutes

Sprint start date: 7th of October 2019
Sprint end date: 13th of October 2019
Venue: PIBT
Participants: Avishka
Savani

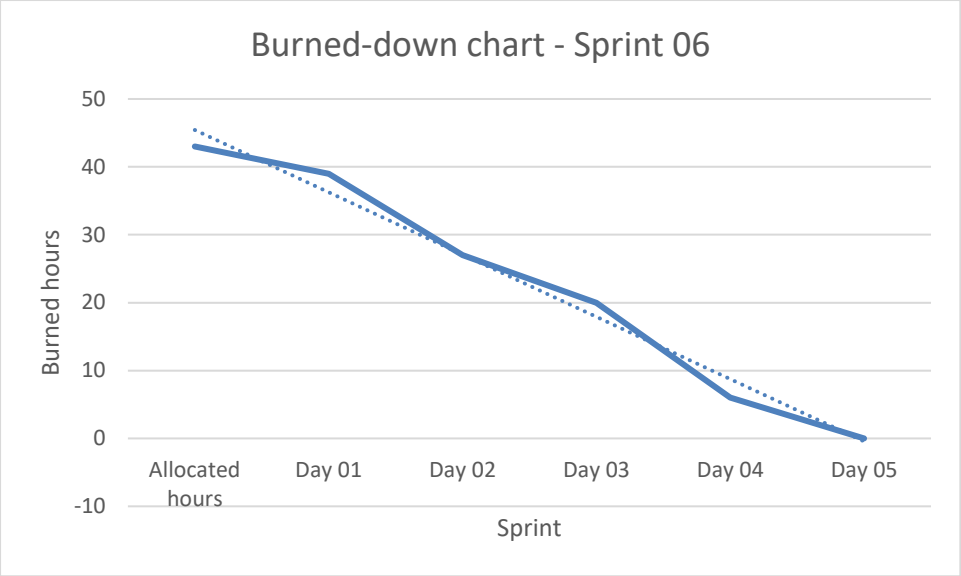
Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Statistical report functions had some issues that needed to be clear and take it to fix.

7.10. Sprint 8

7.10.1 Spring Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	1	1	1	1	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	1	0	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	3	2	1	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	2	2	1	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	4	2	2	0	0	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	2	0	0
7	Prepare test cases for test Admin panel	Savani	QA	3	3	2	2	1	0	0
8	Test the Admin panel using advocate test cases	Savani	QA	1	1	1	1	0	0	0
9	Documenting test results	Savani	QA	2	2	2	2	1	0	0
10	Design the table to Admin panel	Avishka	Database designer	3	3	2	1	0	0	0
11	Implement SQL functions related to Admin panel	Avishka	Database designer	5	5	4	3	1	0	0
12	Fixing of bugs reported on test results	Avishka	Programmer1	3	3	1	0	0	0	0
13	Implement the UI design for Admin panel	Avishka	Programmer1	4	4	3	1	0	0	0
14	Backend code for Admin panel	Avishka	Programmer1	3	3	3	2	1	0	0
15	Testing the Admin panel	Avishka	UI designer	3	3	3	2	0	0	0

7.10.2 Burn Down Chart



7.10.3 Meeting Minutes

Sprint start date: 14th of October 2019
Sprint end date: 20th of October 2019
Venue: PIBT
Participants: Avishka
Savani

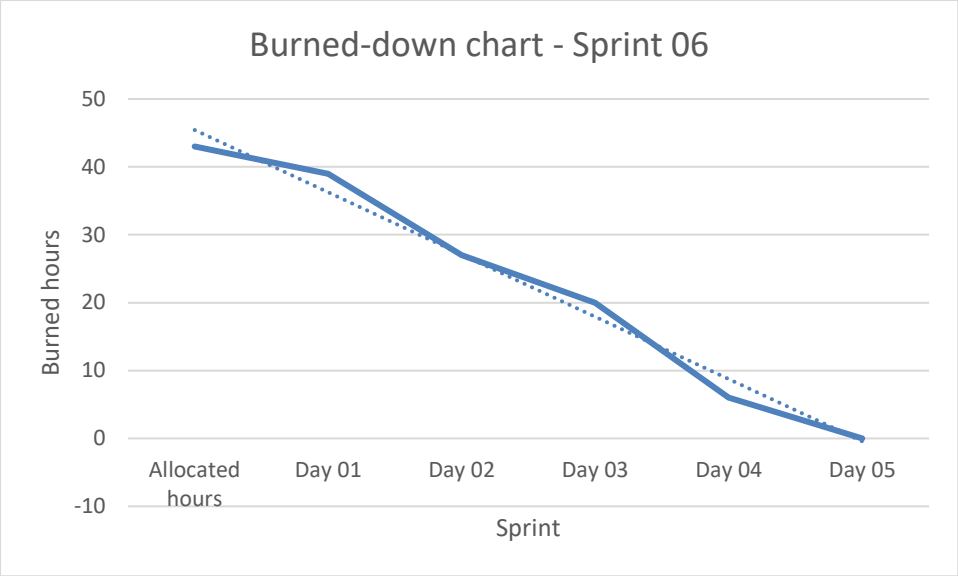
Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Rreported bugs for Statistical report function will be taken to this sprint. Re-test the fixed bugs of article download function & UI.

7.11 Sprint 9

7.11.1 Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	1	1	1	1	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	1	0	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	3	2	1	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	2	2	1	0	0	0
5	Discussion and finalizing the features and layout	Savani	Scrum master	4	2	2	0	0	0	0
6	Discussion on test results and required changes with developers & QA	Savani	Scrum master	2	2	2	2	2	0	0
7	Prepare test cases for test the all system	Savani	QA	3	3	2	2	1	0	0
8	Test the System using advocate test cases	Savani	QA	1	1	1	1	0	0	0
9	Documenting test results	Savani	QA	2	2	2	2	1	0	0
10	Fixing of bugs reported on last sprint	Avishka	Programmer1	4	4	3	2	0	0	0
11	Finalize the UI designs in the system	Avishka	Programmer1	5	5	3	3	2	0	0
12	Finalize the backend code for the system	Avishka	Programmer1	4	4	4	2	2	0	0
13	Finalize the database in the system	Avishka	Database designer	5	5	3	3	2	0	0
14	Implement the database backup system	Avishka	Database designer	3	3	3	2	2	0	0

7.11.2 Burn Down Chart



7.11.3 Meeting Minutes

Sprint start date: 21st of October 2019
Sprint end date: 27th of October 2019
Venue: PIBT
Participants: Avishka
Savani

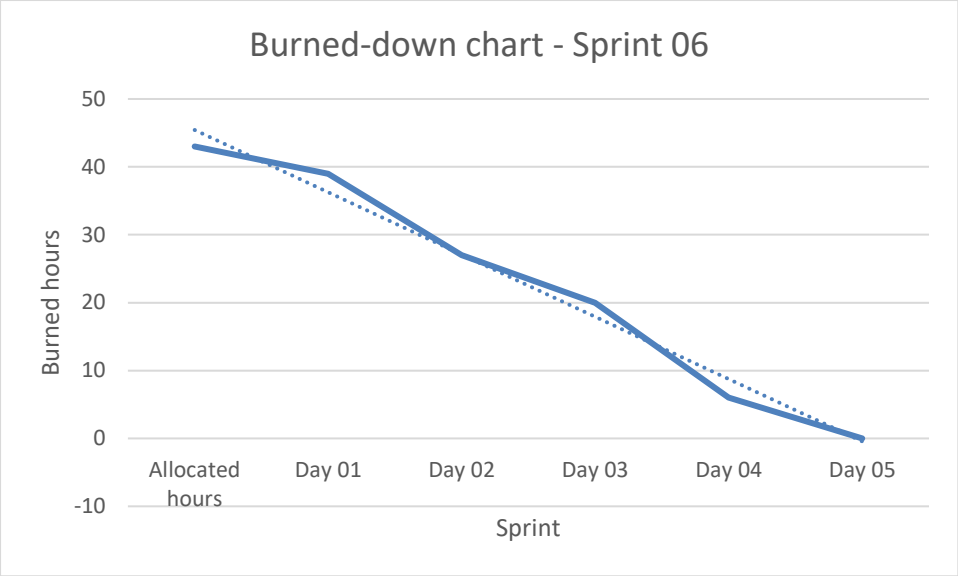
Meeting Minutes:
Discussed what the drawbacks of the previous sprint are. Come up with the implementation.

7.12 Sprint 10

7.12.1 Sprint Backlog

Task No	Description	Name	Role	Allocated hours	Remaining hours as end of					Remaining hours
					Day 01	Day 02	Day 03	Day 04	Day 05	
1	Verification of sprint backlogs	Savani	Product owner	2	1	1	1	1	0	0
2	Verification of test results with QA	Savani	Product owner	2	2	1	0	0	0	0
3	Discussion on findings of test results with Scrum master	Savani	Product owner	3	3	3	2	1	0	0
4	Preparation of sprint backlog	Savani	Scrum master	3	2	2	1	0	0	0
5	Discussion and finalizing the System	Savani	Scrum master	4	2	2	0	0	0	0
6	Discussion on implemention	Savani	Scrum master	3	2	2	2	2	0	0
7	Documenting the user manual	Savani	Scrum master	4	3	2	2	1	0	0
10	implement the database	Avishka	Database designer	6	6	4	2	0	0	0
11	implement the system	Avishka	Programmer1	7	7	6	5	3	0	0
12	implement a backup method	Avishka	Database designer	3	3	1	0	0	0	0
13	Finalaize the system	Avishka	Programmer1	5	4	3	1	0	0	0

7.12.2 Burn Down Chart



7.12.3 Meeting Minutes

Sprint start date: 28th of October 2019
Sprint end date: 3rd of November 2019
Venue: PIBT
Participants: Avishka
Savani

Meeting Minutes:
Discussed what the drawbacks of the previous sprint and implement the new system.