



SECJ2203: Software Engineering

PROPOSAL FOR FABU ALUMNI MANAGEMENT SYSTEM

Team Name: Group 5 and Group 7

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Stakeholder(s):

1. FABU Alumni
2. FABU Staff

1. Introduction

From Oxford Advanced Learner's Dictionary 6th Edition, alumni refers to the graduates of the educational institution in question. The word means the former students or pupils of a school, college, or university.[1]

Alumni Management System is an online application system which can act as an interactive medium between the old student and the School, College, University or institution. An Online Alumni System is a web based application which helps the institutions to track old students and to track them for future endeavours. At the same time it helps the alumni to communicate with the institution, may be a school, or college or a university and with the old batch mates. Alumni management software enables organizations, typically universities and colleges, to stay in touch with their alumni, engage them through communications and events, and solicit donations. [2]

University Technology Malaysia (UTM) has its own Alumni System for example UTM alumni. However, it mainly focuses on the whole UTM alumni community. The conducted programs dabble at a wide range of fields. For instance, cooperation between universities, students' mental growth and entrepreneurship. Besides, alumni are also able to donate to UTM students through UTM Alumni Care Fund, Cloud10 and endowment UTM. Anyway, it does not contain a list of alumni which we think is a necessary feature for an alumni management system. [3]

In this project, we will customize the alumni management system for the Faculty of Built Environment and Surveying (FABU). They **need** this system to bring a close relationship between FABU alumni and the current FABU community in UTM. Our **targeted users** are staff and alumni of FABU. This system will provide a platform for the FABU community to organize and publicize the events which focus more on themselves. Moreover, alumni of FABU are able to give the donation to FABU directly. He also hopes that FABU alumni are able to search their old friend through this system since every FABU alumni will create an account for it. They can search them through some keywords for example name and batch. Besides, alumni are also benefited from this system because if they keep close relationships with FABU association, they could have a huge network with a lot of professional contacts not only lecturers but also other alumni. They have the potential to be great resources for informational interviews or introduction. [4]

The **proposed approach** to the FABU Alumni Management System will be by using a laptop. The users are required to create their accounts to sign in to the system. Their profile

will be recorded into the FABU database for the alumni. There are few **key features** that will be implemented in our system. The first feature is managing account information. Both alumni and administrators are able to register, login, edit profile. The next feature is news and event management. For staff, they can manage news, events and sponsorship including add, delete and update the details of the news and event. For alumni, they are able to view various types of events that will be organized in FABU. They will be provided options to sponsor and join the event. Besides, staff are able to manage donations by adding, delete and update. The alumni are able to view and make donations to FABU through this feature. Apart from that, the staff and alumni will be able to generate graphs about the database recorded in the system. They will also be able to search other alumni information in this system.

This system will bring **benefits** to the FABU community. The first benefit is that a large amount of alumni data can be saved in this system. The user can view and filter those data easily as well as generate a simple graph from them. In addition, since the system will provide a platform for the user to view, organize, join and sponsor the events, the alumni can sponsor those events by this official channel which is more safe and secure. This is the same for donations, the alumni can make donations more conveniently and effectively. The user can also view the news in FABU so they will always get the latest information through the news section. Furthermore, alumni are able to find their old friend who they have lost contact with. Their work will be eased when they want to find someone contact number or email.

The current **existing systems** are Microsoft Excel and UTM alumni website. The alumni's personal information and data is stored by using Microsoft Excel. The staff or admin will update the upcoming events or update other information such as the student program, alumni's gallery and news manually on UTM alumni website. The **difference in our proposed system** with the current existing systems is that the FABU Alumni Management System focuses on the connection between FABU staff and alumni. Therefore, the FABU Alumni Management System has a platform for the alumni to search and communicate with their friends which imitates some features of social media platforms these days. For the manual system, they are unable to update their information by themselves. They can only contact the administrator to update their information which is inconvenient and ineffective. Donations must also be made manually. Thus, by using our proposed system, they are able to update their profile in a single-click and make donations directly to FABU if they use our proposed system. Not to mention it is efficient and secure.

2. Existing Systems

The current existing system consists of two different systems, a manual system for data tracking and a web page for the alumni to check on the event held by the faculty. The Faculty of Built Environment and Surveying (FABU) administrator keeps track of alumni's personal information using Microsoft Excel while the FABU's alumni can view the current event and the details of the faculty through the UTM alumni website.

FABU's administrator employs a traditional file-based structure that is prone to human error and unsuited to collaborative work. The contact and the details of the alumni need to search row by row for tracking purposes. Moreover, data in Microsoft Excel cannot be sorted and organized based on different queries. Even though Excel provides password-based worksheet authentication, it only provides a low level of security and is easily broken. It causes the personal information of the alumni is not secure. The alumni are unable to change their personal details by themselves. They are required to contact the administrator for the information update process.

UTM alumni website was initialized on April 1st 1996 for the purpose of building a significant connection between UTM Alumni and UTM. The staff or admin will update the upcoming events or update other information such as the student program, alumni's gallery and news manually on UTM alumni website. Even though this system provides several services for the alumni but it does not have a function for the students, alumni or lecturer to search and view the profile of other UTM alumni. The alumni need to check the recent event held by the faculty, news, and the charity from the web pages manually. This function is used to keep in touch with every UTM alumni so they will not miss out some important events. The donation must also be completed manually. Furthermore, it might cause difficulty in sending help by "UTM Alumni Care Fund" to the alumni who were unemployed and facing economic problems due to health problems. It may result in them missing out on important information or events.

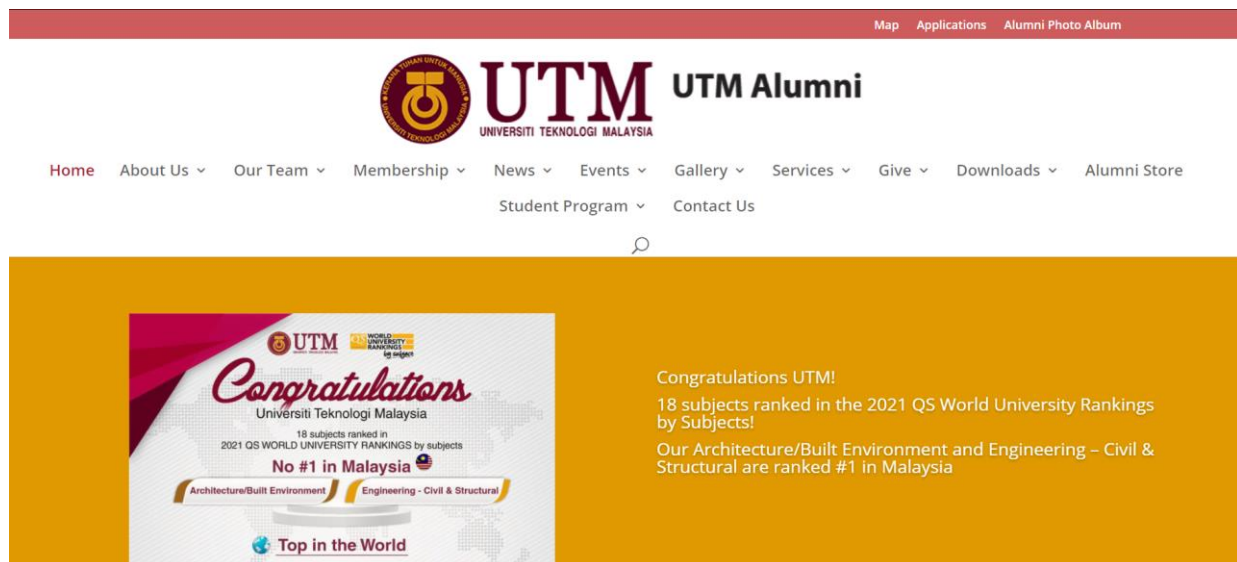


Figure 1: Main interface of the UTM alumni system

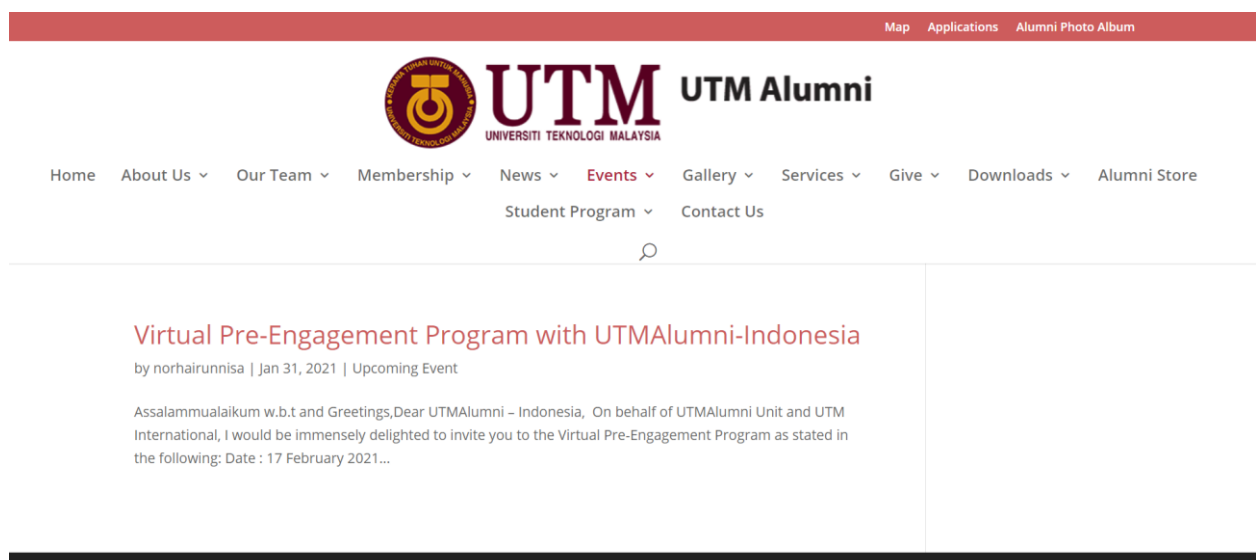


Figure 2: Events page of the UTM alumni system



Figure 3: News page of the UTM alumni system



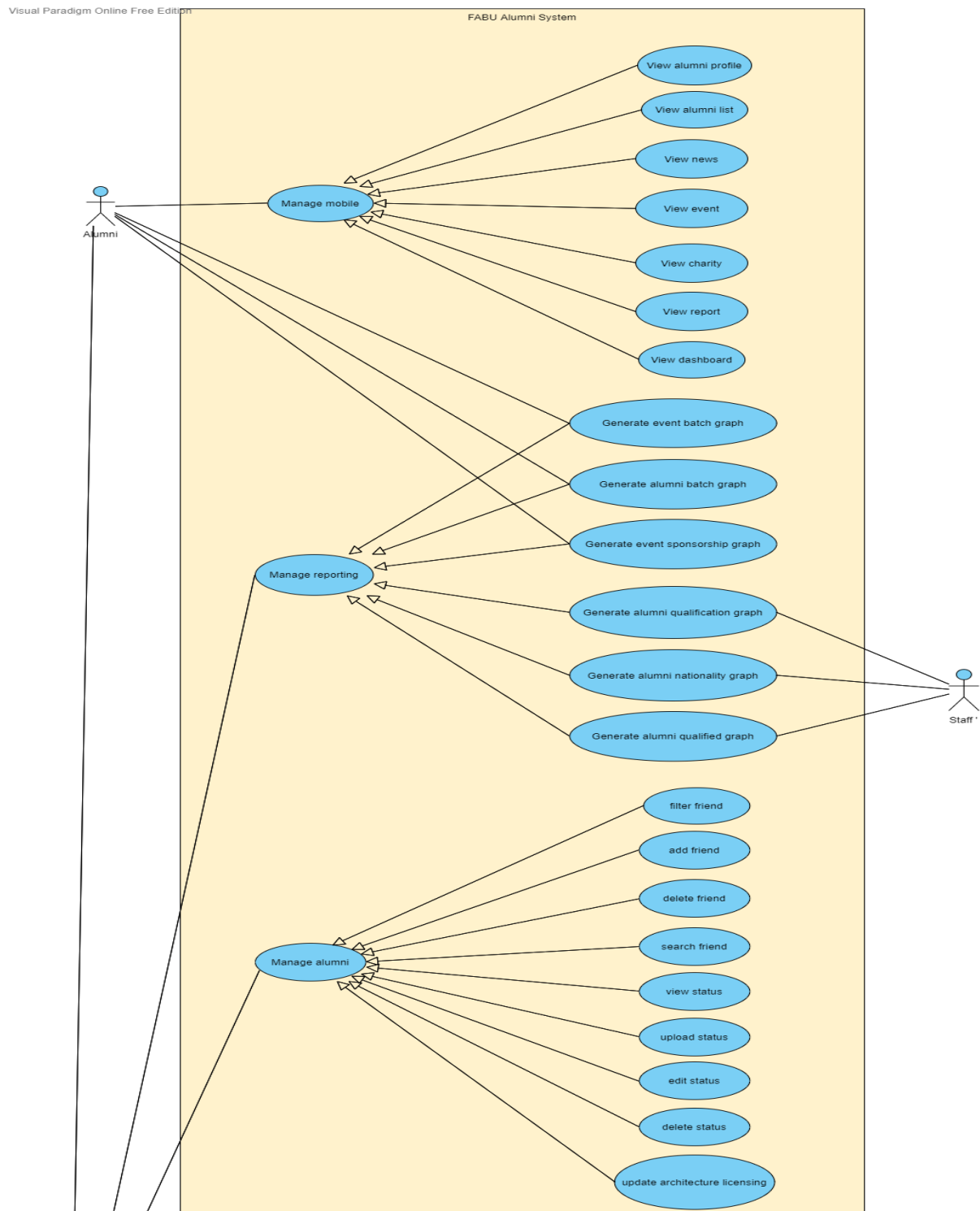
Figure 4: Student program page of the UTM alumni system

Table 1: Comparison of existing systems

Microsoft Excel	UTM Alumni System (existing system)	FEATURES	FABU Alumni System (proposed system)
Yes (Data tracking only)	No	Alumni profile	Yes
No	Yes	Events	Yes
Yes (Data tracking only)	Yes	Donation	Yes

3. Proposed System

Based on the problems found in the existing system that uses Microsoft Excel to manage the Fabu Alumni data, we have proposed the Fabu Alumni Management System. It is a computerized system to replace the manual type of system that uses Microsoft Excel. The proposed FABU Alumni Management System helps the alumni users to view all the alumni information by providing a more reliable experience compared to the manual system. And different users will have different interfaces and different access to the system.



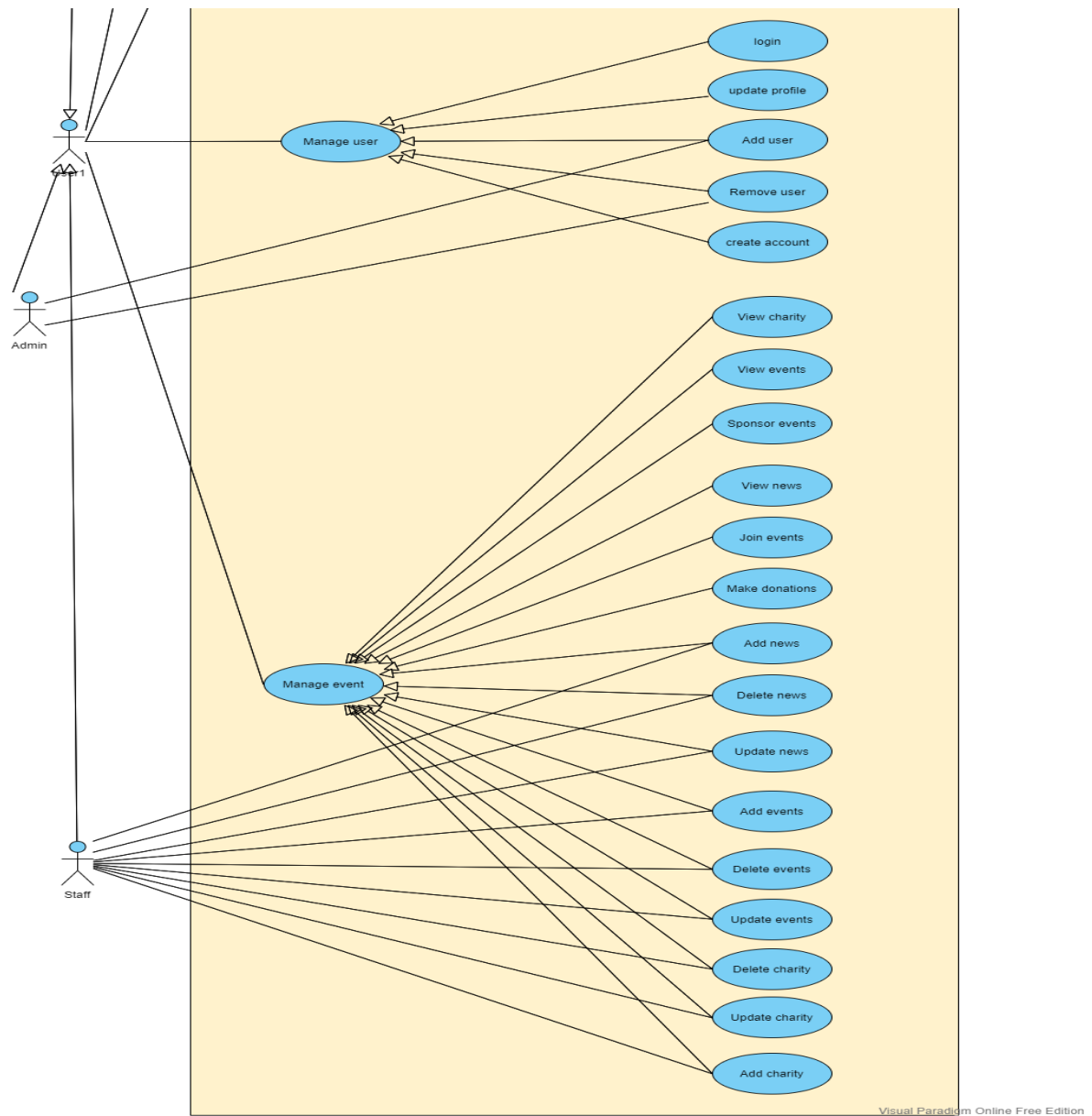


Figure 5: Use Case Diagram of FABU Alumni System

4. Functional Requirements

4.1 View alumni profile (mobile)

The alumni shall be able to view alumni profiles using mobile.

4.2 View alumni list (mobile)

The alumni shall be able to view the alumni list using mobile.

4.3 View news (mobile)

The alumni shall be able to view the news using mobile.

4.4 View event (mobile)

The alumni shall be able to view the event using mobile.

4.5 View charity(mobile)

The alumni shall be able to view the charity using mobile.

4.6 View report (mobile)

The alumni shall be able to view the report generated by staff.

4.7 View dashboard (mobile)

The alumni shall be able to view the dashboard using mobile.

4.8 Generate alumni qualification graph

The staff shall be able to generate alumni qualification graphs.

4.9 Generate alumni nationality graph

The staff shall be able to generate alumni qualification graphs.

4.10 Generate alumni qualified graph

The staff shall be able to generate alumni qualified graphs.

4.11 Generate event batch graph

The alumni shall be able to generate event batch graphs.

4.12 Generate alumni batch graph

The alumni shall be able to generate alumni batch graphs.

4.13 Generate event sponsorship graph

The alumni shall be able to generate event sponsorship graphs.

4.14 Add friend

The alumni shall be able to add friends.

4.15 Delete friend

The alumni shall be able to delete friends from their friend list.

4.16 Search friend

The alumni shall be able to search friends.

4.17 Filter friend

The alumni shall be able to filter their friends.

4.18 View status

The alumni and staff shall be able to view status from their friends and themselves.

4.19 Upload status

The alumni and staff shall be able to upload status.

4.20 Edit status

The alumni and staff shall be able to edit status.

4.21 Delete status

The alumni and staff shall be able to delete their status.

4.22 Update architecture licensing

The alumni shall be able to update their architecture licensing.

4.23 Login

The user shall be able to login their profile.

4.24 Update profile

The user shall be able to update their profile.

4.25 Add user

The admin shall be able to add users.

4.26 Remove user

The admin shall be able to remove users.

4.27 Create account

The alumni and staff are able to create an account.

4.28 View events

The staff and alumni shall be able to view the events.

4.29 Add news

The staff shall be able to add news.

4.30 Update news

The staff shall be able to update the news.

4.31 Delete news

The staff shall be able to delete the news.

4.32 View news

The alumni and staff shall be able to view the news.

4.33 Add events

The staff shall be able to add new events.

4.34 Update events

The staff shall be able to update the details of the events.

4.35 Delete events

The staff shall be able to delete the events.

4.36 Join event

The alumni shall be able to join the events.

4.37 Add charity

The staff shall be able to add the charity information.

4.38 Update charity

The staff shall be able to update the charity information.

4.39 Delete charity

The staff shall be able to delete charity.

4.40 View charity

The staff and alumni shall be able to view charity.

4.41 Make donations

The alumni shall be able to make donations.

4.42 Sponsor events

The alumni should be able to sponsor events.

5. Non-Functional Requirements

5.1 Security

The system should protect the user password against unauthorized access.

The system should not allow alumni to update and delete other user's information.

5.2 Accuracy

The system should display accurate graph information to the user.

The system should display accurate alumni information to the user.

5.3 Efficiency

The system should display the pages within milliseconds.

5.4 Mobility

The user should be able to access the system with both PC and mobile.

5.5 Usability

The system shall display good interfaces that achieve Shneiderman's Eight Golden Rules. The system shall be user-friendly and easy to use for alumni and staff.

5.6 Availability

The staff shall be able to manage the event, charity and news at any time during the day.

6. Schedule

Figure below shows the schedule of the project in burn up chart format. This chart is used because we are using agile methodology. The schedule is made based on the 15 weeks plans in the course outline of this semester and priorities of each phase of the project.

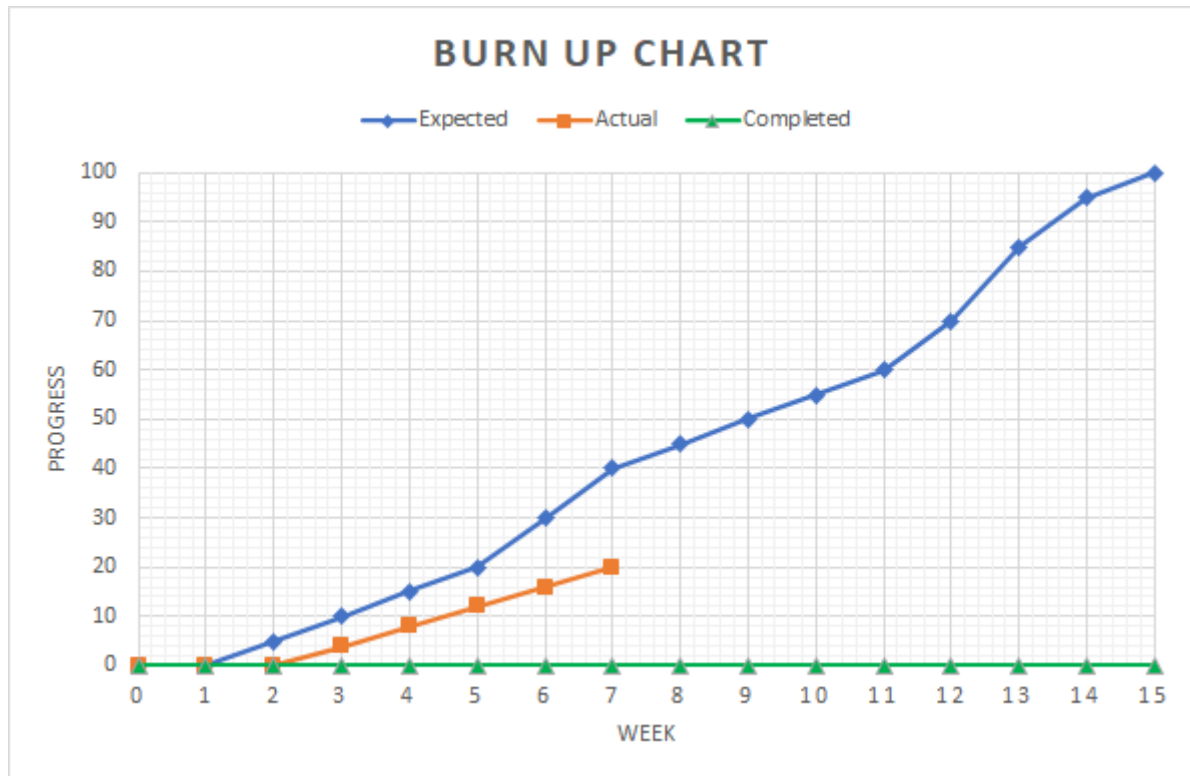


Figure [number of fig]: Burn Up Chart

As shown above, the expected progress is made as the direction for the team members to complete this project. Meanwhile, the current actual progress and the completed task are recorded as shown in the chart as we were still completing this proposal.

7. References

- [1] University of Oxford. (2000). Alumni. In *Oxford Advanced Learner's Dictionary* (6th Edition, p. 49). Oxford University Press.
- [2] Izmailova, S. (2020, April 3). *The Top 10 Alumni Management Software Options*. Wild Apricot Blog. <https://www.wildapricot.com/blog/alumni-management-software>
- [3] Shirke, A. (2020b, March 24). *What Are The Features Of Alumni Management Software?* MasterSoft. <https://www.iitms.co.in/blog/features-of-alumni-management-software.html>
- [4] Adams, A. (2020, June 19). *7 Alumni Benefits You Should Be Taking Advantage Of*. The Muse. <https://www.themuse.com/advice/7-alumni-benefits-you-should-be-taking-advantage-of>