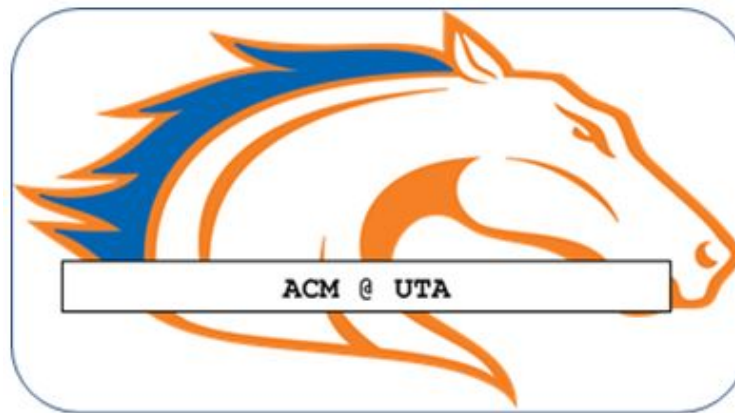


**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
THE UNIVERSITY OF TEXAS AT ARLINGTON**

**PROJECT CHARTER  
CSE 4316: SENIOR DESIGN I  
SPRING 2020**



**TEAM 5  
ACM'S WEB**

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## REVISION HISTORY

Revision	Date	Author(s)	Description
0.1	02.24.2020	SK, VRD	document creation
0.2	05.11.2020	VRD	complete draft
0.3	08.17.2020	VRD	final draft

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## 1 VISION

Currently the ACM chapter at UTA does not have a fully functioning website that functions as efficiently as the admins and the users would like. The vision of this project is to build them this website that serves the organization's outreach and membership goals.

## 2 MISSION

We will build a website for the ACM chapter at UTA that will be fully functional, highly efficient and extremely user friendly. We will also create documents and tutorials for maintenance of the website for the future webmasters.

## 3 SUCCESS CRITERIA

Upon completion of the basic website, we hope to see the following changes:

- A space which all users can navigate easily.
- A notification board where all organization events will be posted and regularly updated.
- An option for users to be more involved in the organization by joining a mailing list.
- A functional space for all types of users(non-paying, paying and admin/officers).
- A space where paying members can log in and see events and posts exclusively for them.
- A way to automate notifications to users about events depending on their member status.
- A way to automate notifications about payments to members whose membership will soon expire so that they can plan ahead.
- A way for ACM Officers/Admins to navigate the website with the privileges specific to their office.
- An option for the user to unsubscribe.
- A way for ACM Officers/Admins to:
  - Create, edit posts
  - Upload photos of various events or activities
  - Update sponsor logos
    - \* Clicking a logo will redirect it to a link that sponsor wants.
    - \* The size of the logo should depend on how many logos are going to be there.
  - Can see full membership list.
  - Change status of members. For example: from non-paid to paid or vice-versa.

If time and resources permit, we hope to add additional functionality in areas like :

- Making it easier for users to join the organization with online payments.
- Create a community that represents what it is like to be a part of this organization.
- Emailing ACM officers a confirmation of the paid members' sign-up.
- Creating a 'Contact Us' link that helps the users to contact ACM Officers.

## 4 BACKGROUND

The current ACM Chapter at UTA's website is pretty basic and mostly non-functional. The most important thing is that it does not even have its own independent website. It is a part of one of the Organizations tab in the MavOrgs's main website. When we go on the ACM website, there is just a brief description of ACM in general and how and where to pay for membership. Additionally, the website only contains one photo.

The website does not have functionalities for different user groups such as everyday visitors, non-paid members, paid members and admins/officers. It does not have certain access for just the paid members that separate them from the non-paid members. Admins/officers do not create, edit posts, upload photos and update sponsor logos. Also, they should be able to see the full membership list and change the status of people from non-paid members to paid members. There is no such thing as an automatic membership expiration and also email notifications prior to those paid membership expiration. The user interface is not easy to use for anyone especially the admins/officers who have to regularly create and edit posts on the website. There is no email notification system for paid members for exclusive events. It does not give anyone the option to unsubscribe. It also does not have an online payment system at a time when pretty much most of the transactions are completed online. Also, it does not have the feature to email ACM officers a confirmation of the paid members' sign-up. Finally, it does not have a 'Contact Us' link that helps the users to contact ACM Officers.

## 5 RELATED WORK

Since, this project is all about building, deploying and maintaining a website, the state-of-the-art would be any website that is well-designed and is user-friendly. The solutions to this project are found by academic research. They are commercially available as well.

## 6 SYSTEM OVERVIEW

We are planning to create a user-friendly and a good looking Front-End backed up by a reliable and efficient Back-End.

The initial Dataflow Diagram of the System Architecture for this Project is given in the next page.

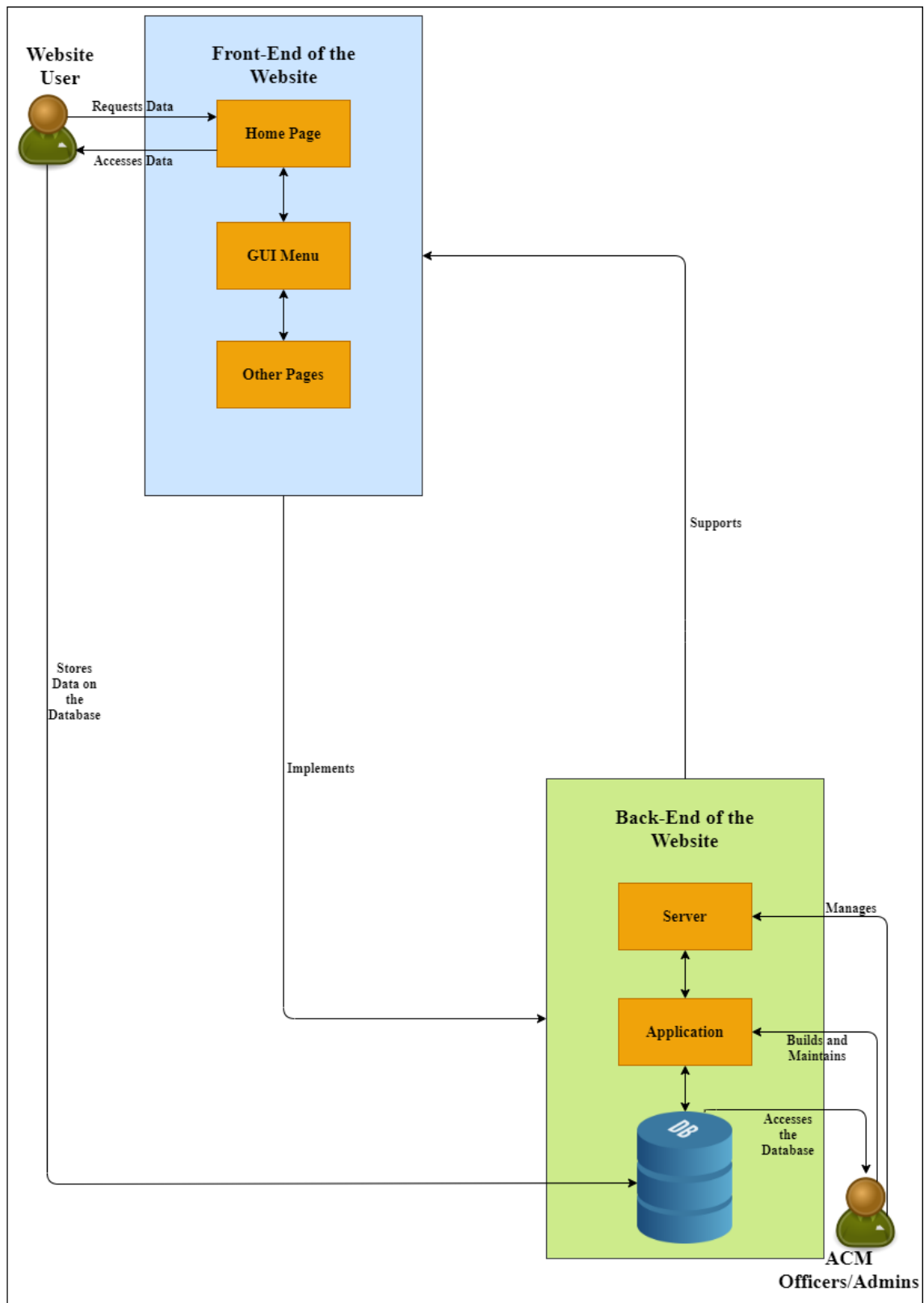


Figure 1: Dataflow Diagram of the System Architecture of the Project



## 7 ROLES & RESPONSIBILITIES

The stakeholders of the project are:

Dr. Shawn Gieser and ACM Officers - Sponsors

The sponsors are going to be the primary stakeholders of this project who will make sure everything is being done correctly and all the requirements are met.

Dr. Shawn Gieser - Project Manager

The Project Manager is the main point of contact for the customers. Also, if team members have any questions regarding the project, it will be answered by the Project Manager.

Shreyasi Kinhekar - Team Member

Vikram Raj Dotel - Team Member

Diwakar Parajuli - Team Member

Mohamud Dahir - Team Member

Teams members are responsible for working on the actual website and make sure they are following the requirements given by the sponsors. They have the most work and responsibilities than any other stakeholders in the project.

All the team members will take turns being the Scrum Master. Shreyasi and Vikram will take turns being the Product Owner. For the customers, the point of contact will be Dr. Gieser whereas for the sponsors, the point of contact will be Vikram.

## 8 COST PROPOSAL

The approximate budget for this project should not be a whole lot since we are just building a website. Most of the tools needed for the project are free and readily accessible on the internet.

The budget money will come primarily from the Department of Computer Science and Engineering at UTA.

The breakdown of the individual expenses is given on the table in the Preliminary Budget section below.

### 8.1 PRELIMINARY BUDGET

A high level budget table is given below:

Components	Budget (USD)
Planning the build	50.00
Tools needed for the build	100.00
Designing the website	50.00
Software Licenses	100.00
Maintaining the website	100.00

Table 1: Overview of Preliminary Budget

### 8.2 CURRENT & PENDING SUPPORT

Currently, the only funding source for this project is the Department of Computer Science and Engineering at UTA. We do not have any other potential funding sources as of now.

Since, this project is a non-sponsored project, the default funding amount provided by the UTA is 800 US Dollars.

## **9 FACILITIES & EQUIPMENT**

Since, this project is all about building, deploying and maintaining a website, we do not need a lot of lab space. The project will need a limited amount of lab space but a significant amount of software tools.

## **10 ASSUMPTIONS**

Based on the knowledge, experience and the information available on hand for this project, we have come up with a list of assumptions. They are:

- The ACM Officers/Admins will be able to set up the chapter website on the ACM servers.
- The chapter server account will allow ACM Officers/Admins to load files through SFTP (Secure FTP over SSH) to set up and maintain their Chapter web pages.
- The website will be up and running as soon as it is deployed.
- The future webmasters will be skilled and well-equipped to maintain the website.
- The ACM Officers/Admins will be able to change a few things on the website if needed.

## **11 CONSTRAINTS**

Like any other software development project, this project has a set of constraints as well. The five most critical constraints for this project are given below:

- The project must be completed by August 17, 2020.
- The total cost for the project must not exceed 800 US Dollars.
- The only technologies available to the ACM chapter include PHP, MySQL, Tomcat, and Perl.
- The only host provider that ACM uses is A2 Hosting.
- The project must be completed following the original requirements given by the sponsors.

## **12 RISKS**

Every software development project has their own set of risks. We have identified a list of risks associated with this project; some primary and some secondary. And we have sorted the risks with the highest risk exposure at the top. Risk exposure (in days) is calculated by multiplying the probability of the risk occurring by the effect of the said risk becoming a reality or the size of the loss (in days).

The following high-level risk census contains identified project risks with the highest exposure. Mitigation strategies will be discussed in future planning sessions.

Risk description	Probability	Loss (days)	Risk exposure (days)
Changes in Project requirements	0.40	30	12
Development and environment issues	0.50	20	10
Time conflicts caused by virtual work environment due to CoViD-19	0.50	10	5.0
Team member non-participation/drop	0.15	30	4.5
Miscommunication	0.10	10	1.0

Table 2: Overview of highest exposure project risks

## 13 DOCUMENTATION & REPORTING

### 13.1 MAJOR DOCUMENTATION DELIVERABLES

#### 13.1.1 PROJECT CHARTER

This document will be maintained and updated regularly during the project. The initial version was delivered on 02/24/2020. The final version will be delivered on 08/17/2020.

#### 13.1.2 SYSTEM REQUIREMENTS SPECIFICATION

This document will be maintained and updated regularly during the project. The initial version was delivered on 03/23/2020. The final version will be delivered on 08/17/2020.

#### 13.1.3 ARCHITECTURAL DESIGN SPECIFICATION

This document will be maintained and updated regularly during the project. The initial version was delivered on 04/13/2020. The final version will be delivered on 08/17/2020.

#### 13.1.4 DETAILED DESIGN SPECIFICATION

This document will be maintained and updated regularly during the project. The initial version was delivered on 07/06/2020. The final version will be delivered on 08/17/2020.

### 13.2 RECURRING SPRINT ITEMS

#### 13.2.1 PRODUCT BACKLOG

The product backlog items will be updated by prioritizing the tasks. These items will be prioritized based on the Sponsor's preferences and the technical requirements needed for them.

#### 13.2.2 SPRINT PLANNING

Each sprint will be planned based on the product backlog. There will be 7 sprints during the project.

#### 13.2.3 SPRINT GOAL

We will ask the sponsors and customers what the next most important goal is and then plan the goal accordingly, keeping the end product in mind.

#### 13.2.4 SPRINT BACKLOG

The team members will decide which tasks get added to the sprint backlog.

#### 13.2.5 TASK BREAKDOWN

Each team member will voluntarily claim tasks they feel most qualified for. This may change depending on how efficient it presents itself to be.

#### 13.2.6 SPRINT BURN DOWN CHARTS

The scrum master for that sprint will be responsible for the sprint burndown charts. They will source the information from the team members by their own preference.

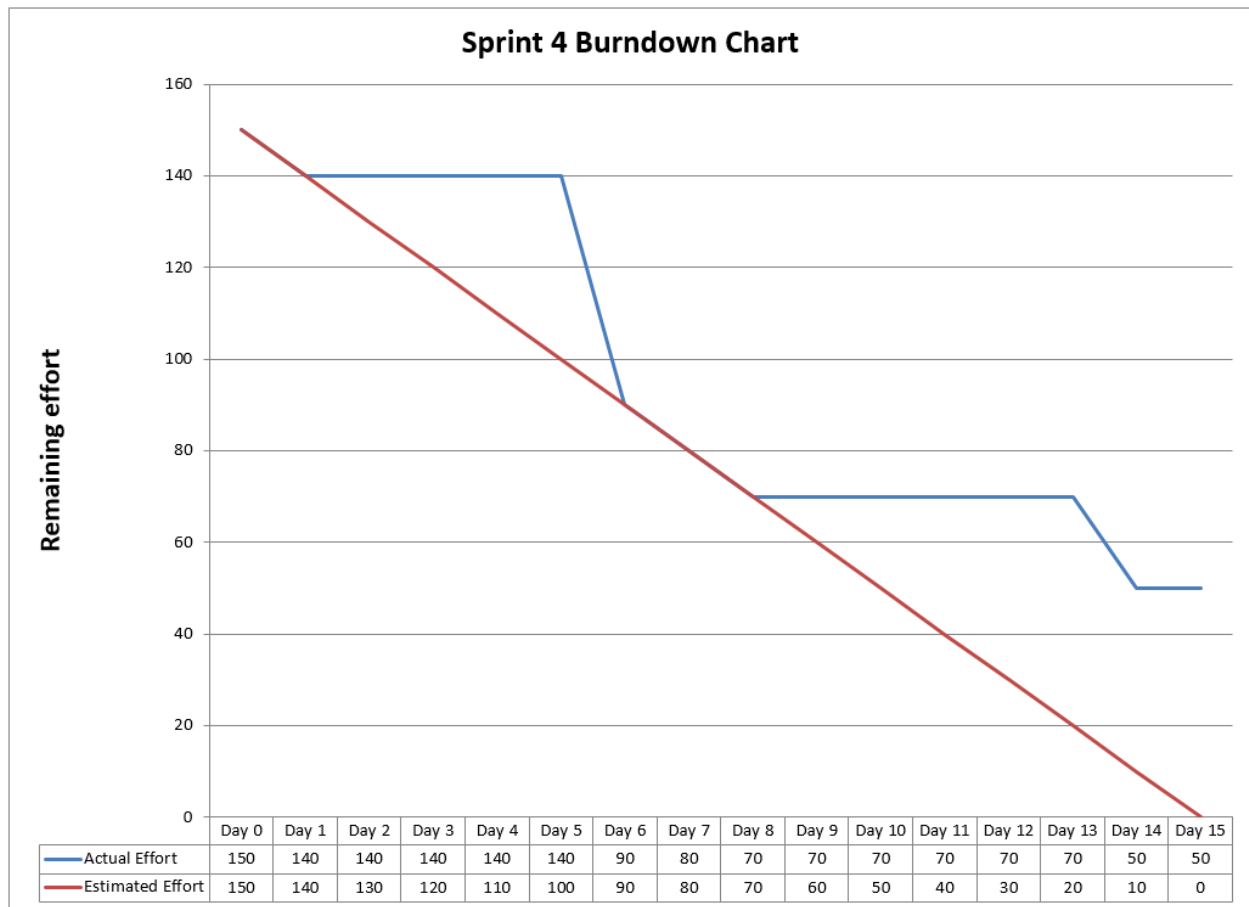


Figure 2: Sprint 4 Burn Down Chart

### 13.2.7 SPRINT RETROSPECTIVE

The Sprint Retrospective is an individual document that will be due after each sprint. But, it will be discussed in the meeting on the Friday before it is due.

### 13.2.8 INDIVIDUAL STATUS REPORTS

These reports will be created when deemed necessary by the Project manager.

### 13.2.9 ENGINEERING NOTEBOOKS

The engineering notebook will be filled at minimum after every team meeting on Fridays and after every meeting with the Sponsor and Project Manager.

## 13.3 CLOSEOUT MATERIALS

### 13.3.1 SYSTEM PROTOTYPE

The official website of the ACM Chapter at UTA will be the final system prototype. It will be demonstrated to the sponsors at the end of the project in August 2020.

### 13.3.2 PROJECT POSTER

A project poster will be made available at the end of this project.

### **13.3.3 WEB PAGE**

This entire project is building, deploying and maintaining the website. So, the web page will be available at the end of the project.

### **13.3.4 DEMO VIDEO**

A demo video will be included at the end of the project. It will show how all the requirements/features have been met.

### **13.3.5 SOURCE CODE**

Currently, we are planning to maintain our source code on GitHub. We will be adopting Git version control system. The source code will be provided to the customers (sponsors). The GitHub repository link will be provided to the customers which will allow them to access the code anytime, anywhere. As of now, the project will not be open sourced to the general public.

### **13.3.6 SOURCE CODE DOCUMENTATION**

We have not yet decided what source code documentation tool we are going to use. But, the final documentation will be provided as a PDF.

### **13.3.7 HARDWARE SCHEMATICS**

Since, this project is purely software, we will not be designing any hardware.

### **13.3.8 CAD FILES**

Since, this project is purely software, it will not involve any mechanical design.

### **13.3.9 INSTALLATION SCRIPTS**

Since, this project is about building a website, the customers and users will not require installation scripts.

### **13.3.10 USER MANUAL**

A user manual and a tutorial video will be provided at the end of the project. That should help the users understand how to use the website efficiently.