CSE ADVISING WEB APPLICATION

Tufan Acharya , Sameer Chaulagain, Nawaraj Bhurtel,

Maheshwor Raut, Ishor Rijal

Executive Summary

Our primary mission was to save student's time by not making them wait outside the advisor's office for very long. The students will never have to miss their class or appointment because our advising system will tell them when to arrive and how much time is left before it's their time to see the advisor. We will be making the advising process completely online by signing up students online and getting rid of the paper based sign-up sheet. The students will also be able to choose a new advisor every time they make appointment. The advisor will also have a very easy interface where they can see who is coming next and advisors will also be able to re-schedule the appointments and change schedule which can be seen by the students before making appointment.

Background

As we started the project, we had at least following consideration in our plans.

- Complete removal of paper-based sign up system and implement online sign up system
- 50% Reduction in the wait time for students
- Easy interface for students to get signed up for appointment
- View of student's degree plan and flow chart
- Students will see what class are already taken and what class they have remaining
- Advisor will see if the student has been advised before or not before appointment starts
- Advisor will be able to re-schedule or change schedule anytime they want

However, as we started gathering requirements and consulting with advisor themselves, their main concern was about revalidating the classes taken by student because of the universities privacy policies, hence we focused on being a web check-in based advising system rather gathering information from the students on what classes they have taken in the past, and avoiding complex databases system to keep track of them all.

Conceptual Design Phase

The advising applications that we designed initially was going to be a web application. The application was planned to have three end points each for the advisor login, student login and another for the admin developer to track the issues and the changes that we are going to implement. The first and the most important page was considered for the students who are targeting to schedule their advising with one of the advisors. The advisors could be either faulty advisors or the staff. The students who are targeting to schedule an appointment can simply input their basic details like UTA ID, majors and the classes they have taken along with the semester for which they are looking to get advised. The students will also be able to choose advisors like faculty/staff if they are available and can put their name in the respective advisors wait list. The second end point was planned to be for the advisors. Advisors could see the list of the students waiting to get advised. Also the advisors would be able to see the name of the respective students. This way they will be able to advise the students more effectively. We will have the databases that stores all the data of the students that have been advised and store their login credentials in cases they came back for advising in near future. We planned the initial tools as java's framework spring for back end programming, however we ended up using php, Bootstrap, jQuery, and few libraries for UI design at the later phase of development.

Detailed Design Phase

The system mainly contains four main layers or subsystems. These layers would function highly individually as well as interact with each other to perform the required functionality for the system. The communication layer would perform the role of bridge to connect between the view layer and control layer, whereas data layer would be helping to handle the data storage and access. Even though data layer might be functional in data access, control layer would be highly administrative in term of roles and data access process.
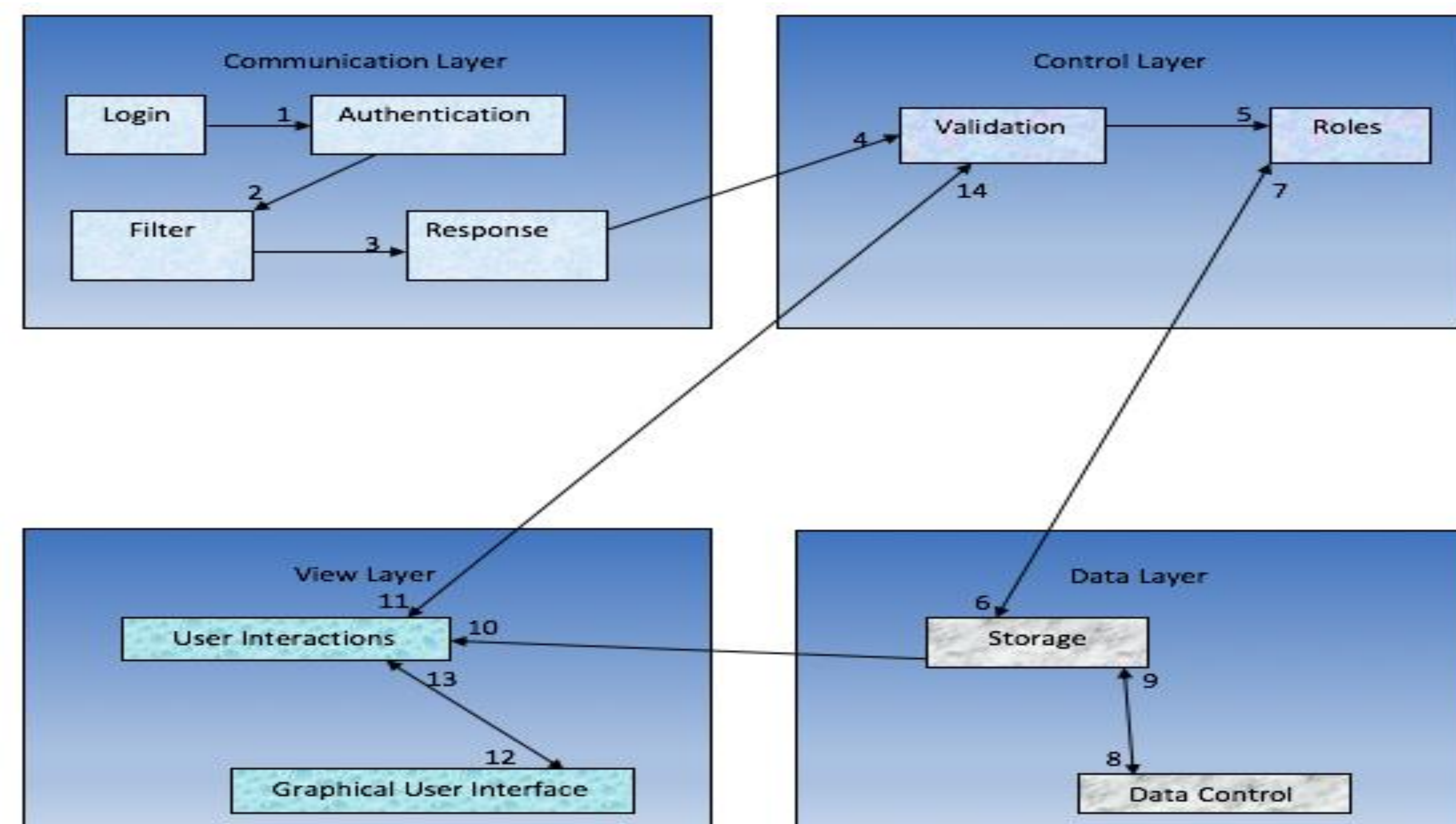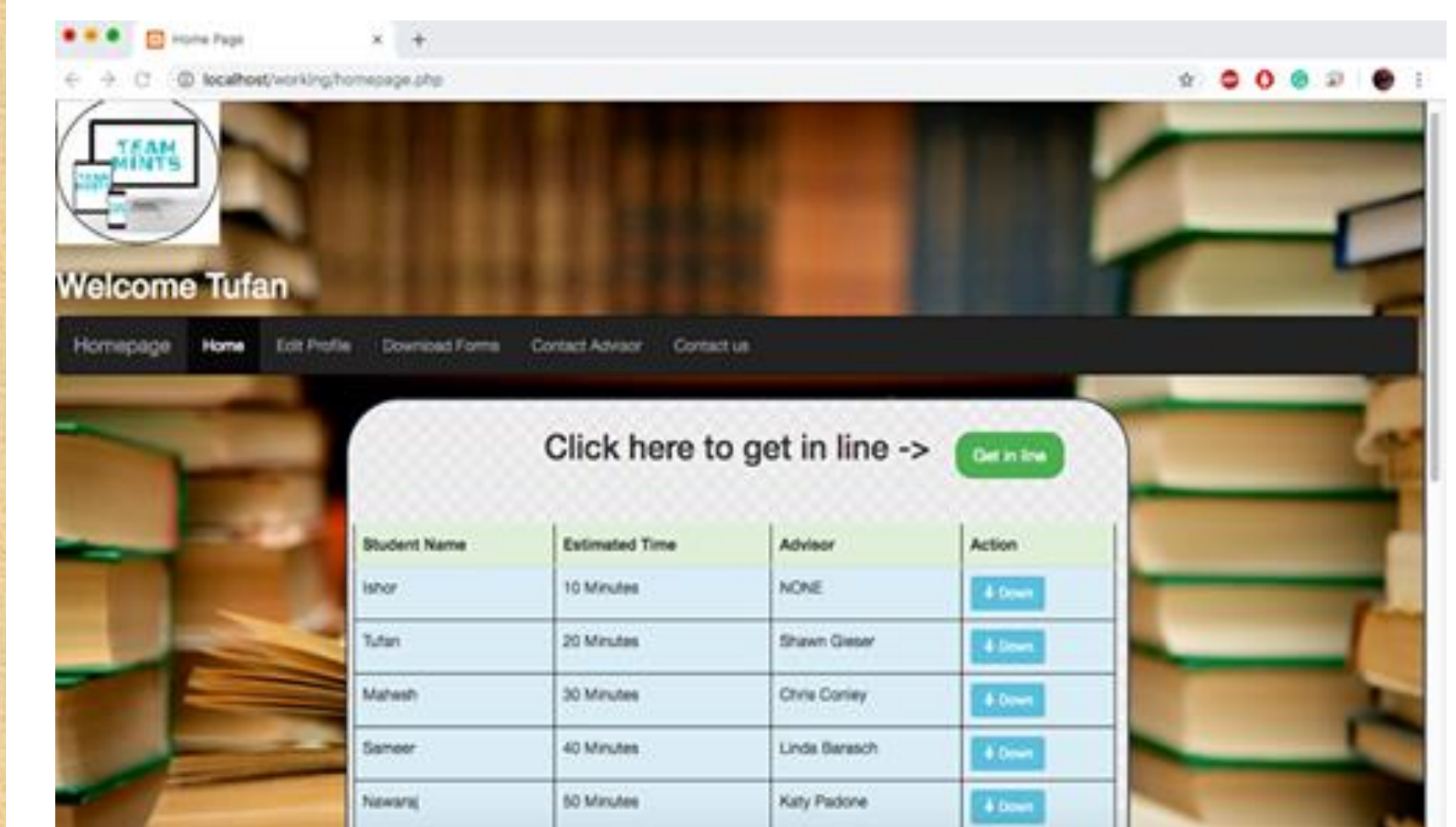

Figure: Implementation level design of the application

Prototype & Test

Most of the concepts that we tried to implement got executed and we tried to cover the general test cases for the user requirements in the prototype. The snapshot providing the general overview of the prototype that we developed is published in the image below.

Conclusions

Even though some of the goals that were initially planned in the initial phase without discussing with advisors about optimizing the classes of students for advisor was dropped very initially during the initial phase of development, most of the client's goal are fulfilled . The specifications considered during the planning phase of the project was kept in implementation throughout the whole development given that it did not effected the implementation. Also, constraints that were considered during the project was maintained. This project gave new experience on developing project from the scratch to delivery of the specified prototype. We are very thankful to Dr. Chris Conley for mentoring throughout this whole journey, and advisors Melissa Rose for discussing requirements with us

References

1. "Faculty Highlight." Undergraduate Study in the Department of Computer Science and Engineering, https://cse.uta.edu/current-students/undergraduate-study.php.
2. "The Division of Student Success - The University of Texas at Arlington." Contact - The Division of Student Success - The University of Texas at Arlington, https://www.uta.edu/studentsuccess/uac/contact.php.
3. "Documentation." Php, https://www.php.net/docs.php.