**Week 4 Assignment – Database Development and Class Registration**

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During the second half of the implementation phase of the software development project additional functionality was added. The functionality added was specifically to allow the user to enroll in and drop classes. This proved to be a more complex addition to the software than I had originally anticipated. The original plans of how this functionality would be achieved had to be changed in the middle of coding. Tables were deleted from the database and replaced with new ones as well. Ultimately, I learned a lot about the importance of remaining agile throughout a project and that there are multiple ways to meet requirements, but they aren’t all going to be the best way to go about it. In this paper I will show the added functionality of the student portal, the database table structures, and the PHP code.

**Image 1  
tblstudent**

A screenshot of a computer

Description automatically generated  
**Image 2  
tblclasses**

A screenshot of a computer

Description automatically generated

**Image 3 & 4  
tblstudentclasses**

A screenshot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

**Image 5**

**Student Profile**

A screenshot of a computer

Description automatically generated

**Image 6**

**Add Class Page**  
A screenshot of a computer

Description automatically generated

**Image 7**

**Select a class from dropdown**

A screenshot of a computer

Description automatically generated

**Image 8**

**Save Class**

A screenshot of a computer

Description automatically generated

**Image 9**

**Data moves to tblstudentclasses**

A screenshot of a computer

Description automatically generated

**Images 10 & 11**

**Add another class and updated screenshot of tblstudentclasses**

A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

**Image 12  
Profile View**

A screenshot of a test

Description automatically generated

**Image 13**

**Drop Class updated profile and tblstudentclasses screenshot**  
A screenshot of a test

Description automatically generated A screenshot of a computer

Description automatically generated

**Images 14 & 15**

PHP code for add classes page:

A screenshot of a computer program

Description automatically generated

A computer code with many text

Description automatically generated with medium confidence

**Images 16 & 17  
Updated PHP code for student profile**A screenshot of a computer program

Description automatically generated

A screen shot of a computer code

Description automatically generated

Throughout this second piece of the implementation phase additional functionality was added to the student portal. In order to implement this piece it required additions to the MySQL database and new PHP code to be produced. One of the requirements was to be able to enroll and unenroll from classes, when I first pictured how the system would accomplish this I thought of checkboxes where the user could go in and check courses that they wanted from a list. Then by unchecking them the class would be dropped. I was able to get a checkbox to appear fairly easily and created a list of classes with the checkboxes. Unfortunately when trying to connect the checkbox functionality to my database I kept running into issues. I determined that my original idea was too complex of a solution for the requirement. My original table for the classes (tblclasses) was formatted in a way that wasn’t great for a large scale system like a student portal, that you’d assume 1000’s of people would be using. I decided to split the drop and enrollment functions between pages. On the add classes page the user is able to scroll through a drop down menu and select a class and add it to their account. This is connected to the INSERT function in MySQL and inserts the class into the database table tblstudentclasses (*How to insert, update, and delete data in MySQL tables, n.d.)*. Once they navigate back to their profile the class is there but has a drop button. This is connected to the DELETE function which removes the class from the database table tblstudentclasses (*How to insert, update, and delete data in MySQL tables, n.d.)*. Since through the PHP code I have added a call for the class codes associated with the specific username they disappear from the profile immediately. I was able to ensure my code worked from the user interface to the database by examining the tables after actions were taken to add or drop classes. In this implementation portion especially there has been a large amount of testing to ensure the functionality meets the requirements. I have experienced in real time what I am sure so many developers have experienced, a good idea becoming overly complex and needing to switch directions. These past two weeks have been like a sprint, where there was a rapid effort to create a system with enough functionality to release to the customer. I had to revisit the various diagrams and SRS documentation to ensure that I was still on the right path with the system I was creating. This was definitely a first hand experience with working within agile methodology, if I had extremely structured and rigid steps I had to take before moving onto another step I don’t think I could have been successful in producing a final product this week. The way the system is designed it also makes it easy to make incrimental improvements over time with future releases (*What is Agile methodology in project management?*, n.d.) The implementation phase can give a development team an idea of how successful the software created is (Koper, 2024). Being able to change direction quickly allowed me to ultimately produce better quality software in the end.

**References**

*How to insert, update, and delete data in MySQL tables.* (n.d.). Prisma’s Data Guide. Retrieved June 11, 2024, from https://www.prisma.io/dataguide/mysql/inserting-and-modifying-data/inserting-and-deleting-data

Koper, K. (2024, June 4). *The 7 stages of software development*. Netguru.com. https://www.netguru.com/blog/stages-of-software-development

*What is Agile methodology in project management?* (n.d.). Wrike.com. Retrieved June 11, 2024, from https://www.wrike.com/project-management-guide/faq/what-is-agile-methodology-in-project-management/