Project Planning Paper

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Industry Partner Database

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Executive Summary:

The main purpose of our project is to consolidate and increase the number of industry contacts in order to diversify the types of student projects, increase the quality of applied learning, and make a greater impact on the community through student projects. It revolves around the creation of a database that will extend outreach and will serve as a collection of useful contacts and information on industrial partners which will solve the problem of accessibility where scattered information can be accessed and viewed from one collective database including all important information on students, employees, and industrial partners.

Scope:

The project team will be held to the following criteria when developing and testing the product.

The following features will be included in the product design:

* Weekly reports will be submitted, including both individual (Weekly Individual Journal) and collective team progress (Weekly minutes), describing accomplishments, future goals and schedule, advancements made and problems faced.
* The team will research the types of information, quantity and quality of information that needs to be stored in the database by interviewing possible clients.
* Few prototypes will be made to exhibit the functionality of the features outlined in this  
  document.
* The team will carefully perform testing of MySQL queries and commands to aid in the development of a successful working model.
* The team will present the prototypes and demonstrate the features to the client  
  upon completion of the development of each prototype.

The product shall adhere to the following regulatory standards:

* The project will adhere to FERPA rights.
* The project will adhere to ITSA regulatory standards.

These assumptions will be made in reference to the design of the product:

* We are assuming that the university’s web server is actively running and in a good working condition.
* We are assuming that the user’s device is running the latest version of the web browser which supports cookies.
* We are assuming that the user’s device is running the latest version of the operating system.
* We are assuming that the user has good internet connectivity without network surges or fluctuations.

Legal and Ethical Analysis:

While building the database we want to avoid:

Duplication of records: Students, employers, or industry partners having the same first and last name. Therefore we will try to assign unique values to different users using the database to avoid any and all kinds of duplication.

False information: As this database will serve to inform students, professors, and deans about multiple projects and happenings across Wichita we need to make sure that the information being provided is legit and up-to-date. We also need to make sure only the right people get the appropriate access to post information in order to avoid misinformation.

Scam artists: Whenever there is some new project it will also attract a bad audience who would want to take advantage of its feature and exploit loopholes in the system for their own benefit. In order to avoid this we are thinking of having some kind of security restriction which would make sure that such a scenario never comes into being.

Spam: As the database will populate lists of important information we want to avoid spam at all costs this will avoid spam from entries and will help keep the database information clearly visible and free from any kind of manipulation and redundancies. Therefore we’ll try to add some kind of anti-spam feature to the webpage for the database in order to avoid such a problem.

We analyzed our project considering all of the aforementioned points and came to learn that each user would need to be verified by submitting their wsu e-mail address which would be a requirement for both WSU students and employees. To prevent users of the same name and unidentified users we would be inputting information inside the database which will help us identify each individual. This will also help us to fight scam artists and get rid of unnecessary spam.

Team Analysis:

Technical Skill Analysis:

* All members of the team have programming experience with MySQL. All members are experienced with writing MySQL queries and designing a database using ER diagrams and UML modeling.
* 3 out of 5 members have front end or web designing experience and are experienced with creating webpages using HTML, HTML 5, CSS 3 and JavaScript.
* 2 out of 5 members have web development or back end experience and are experienced with deploying websites, managing web servers and databases using php.
* All members of the team are familiar with software development life cycle models.
* None of the team members has experience with MariaDB 10.4.14
* None of the team members has experience with InnoDB engine.

Impacts and Skills Shortage:

* Since only 3 out of 5 members have front end or web designing experience, therefore the team will use learning methods to get to know and also review the functionality of the front end software and how it works. Therefore, the coding or prototype implementation phase will take more time.
* Similarly, since only 2 out of 5 members have back end experience, the team will allocate certain time before implementing the back end of the prototype to use learning methods to learn the back end technologies. This also affects the time during the implementation phase. Therefore, the coding or prototype implementation phase will take more time.
* Since, none of the team members have experience with MariaDB 10.4.14 and InnoDB engine, the team will spend at least a week to use learning methods to learn about these technologies. This is also a factor that affects the implementation phase.
* All the above factors impact the delivery dates of the prototypes.

Learning Methods:

* If only a few members have knowledge about the technologies, then the entire team can spend at most a week to learn and review the technologies. Team members experienced with technologies can help other members of the team in learning and also make sure that everyone is on the same page. For example, for the front end version of the prototype, the team only needs to know a segment of HTML that is the concept of forms and also some prerequisites associated with it. The team also needs to know basic CSS and Javascript, which is a lot similar to C++, a technology all the members of the team are familiar with. Therefore the team members will help each other in learning such technologies. Same learning methods will be followed for the back end phase as well.
* If it is the case that none of the team members are familiar with technologies such as MariaDB, then the entire team will spend at most 2 weeks learning the technologies together. We will use Pair Programming technique where one writes code while the other checks it and swap their positions regularly to test their retention of the knowledge regarding the technologies.

Tasks and Deliverables:

1. Research libraries required for each language we will be using and any other materials we need to learn in extra from what we already know.

We will perform a meeting to understand what we need in extra and divide it into different members.

1. Webpage’s front end development.

We will create a webpage that provides the input to the database.

This phase will have 2 different sub phases where on the first phase we will use HTML 5 and CSS 3. In the second phase we will work on Javascript and make the website responsive.

1. Webpage’s back end development.

In this phase we will call a meeting and discuss algorithms we will need to search and rank the contacts that are saved on the database. We will also work on how and what sections we will be grouping our search result based on.

1. Initial database creation and connect all parts.

In this phase we will create sql tables that take and save the user input data. At this point we

will put the code that talks to the database on php file. We will then configure username and

password required to connect and work with the database. Final part would be configuring the

front end to send data to the specific php file.

1. Refined website with less bugs and problems

In this phase we will run a series of tests to find any securities loopholes that could be existing in our code. This will involve checking with our professors and running it on websites that automatically check the security level for the page.

1. Working page deployed and ready to work

This phase will have 2 sub phases . In the first phase we will discuss with the authorities regarding what are the requirements that we need to meet. In the second phase we will change our code to meet the requirement and work with wsu authorities to deploy it on the web server.

Integrated Schedule:

|  |  |  |
| --- | --- | --- |
| S.N | Work | Deliverable Date |
| 1 | Prepare initial front page | 10/16/2020 |
| 2 | Prepare initial back end page | 10/30/2020 |
| 3 | Initial database creation and connect all part | 11/09/2020 |
| 4 | Refined website with less bugs and problems | 11/23/2020 |
| 5 | Working prototype deployed and ready to work. | 12/06/2020 |

We will do the project in the order given in the table. We will first create a working front end of the website in 2 weeks. In consecutive 2 weeks coming we will create a backend page and again database. The same week we create a database, we will also connect all the parts together and make the website work. Then we will spend the next two weeks finding bugs and security holes. After the website is done we will get help from university authorities to deploy the website that might take 2 weeks.

Acceptance Criteria:

We have 2 weeks to complete each part of the full stack website. In those two weeks we will be using the first week to write our code where everyone contributes. The second week we will work on the problem if any, that arises and start testing it on a web server by itself. However we will not be connecting any parts at this point but test on its own for the work. At the end we have 2 weeks to connect the parts and hunt the bugs which is a lot of time. Still if we have a problem, we can use the following two weeks we divided to deploy our site with University authorities. Testing for page speed will not be required as this is a very small input form.