

Mlaeeb.com

Capstone Project

10/22/2015

Honor Pledge: I acknowledge that the Capstone Project is an independent study project to be completed individually. On my honor, I have not received aid on my Capstone Project other than what was provided by my faculty mentor and any persons explicitly cited in my work. I further acknowledge that if I have given any aid to another student in this course, the instructor of this course was made aware of my contributions.

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Objective

The objective of the project is to create a website called “*Malae’eb*” which means fields in Arabic. The website enables customers to reserve soccer fields online in Saudi Arabia. The webpage will provide a database of soccer fields located in the major cities of Saudi Arabia. In addition, it will provide the customers with necessary information about the fields such as location, size, field type (indoor or outdoor), field ground (turf or grass), hourly rate, reviews from previous customers, and availability.

The idea here is to save the customers’ time and money from driving all the way to the location, where they do not have any information about the availability and the rate of the fields. In addition, the website will benefit financially by charging 8% of the fields’ price every time a customer makes a transaction. In addition, there will be a section for advertisements from fitness centers and soccer clubs’ stores.

Client

The clients of the website will be the soccer fields’ owners around the country. Here are some solutions that the website will provide for the owners as well as the customers:

- enables the owners to schedule and keep track of the reservations. This solution will stop them from using pen and papers to keep track of reservations.
- Transactions will be convenient for both parties (customers and owners). The customers will not have to drive to the location to reserve the field.
- The owners will be able to communicate with loyal customers and send them promotions when the business is not busy for example during weekdays.
- promoting the owners’ fields by posting their ratings and customers reviews on the website.

Faculty advisor

Dr. Thomas Narock is an assistance professor of Information Technology at Marymount University since 2014. Dr. Narock teaches in the areas of data science and web application development. He teaches courses such as IT-125 Web Development, IT-225 Advanced Web Development, IT-489 Capstone Project, and IT-680 Master's Project.

Project Plan

The project will involve developing using HTML, CSS, and JavaScript. However, PHP will not be included in the development since it will require more than one semester. In this case, a prototype website will be created to deliver the project on time. The prototype will include the main pages described in the project details section below. The schedule below shows an estimated plan of what will be accomplished before the end of fall 2015 semester.

Task	Estimated time effort	Delivery date
Project draft	Two weeks	10/22/2015
Developing and editing the website	3-4 hours a week	12/11/2015
Peer review II	Two days	11/6/2015
More editing on the website	2-3 hours a week	12/4/2015
Project presentation	3 hours	12/7/2015
Project Retrospective	One day	12/11/2015

Resources

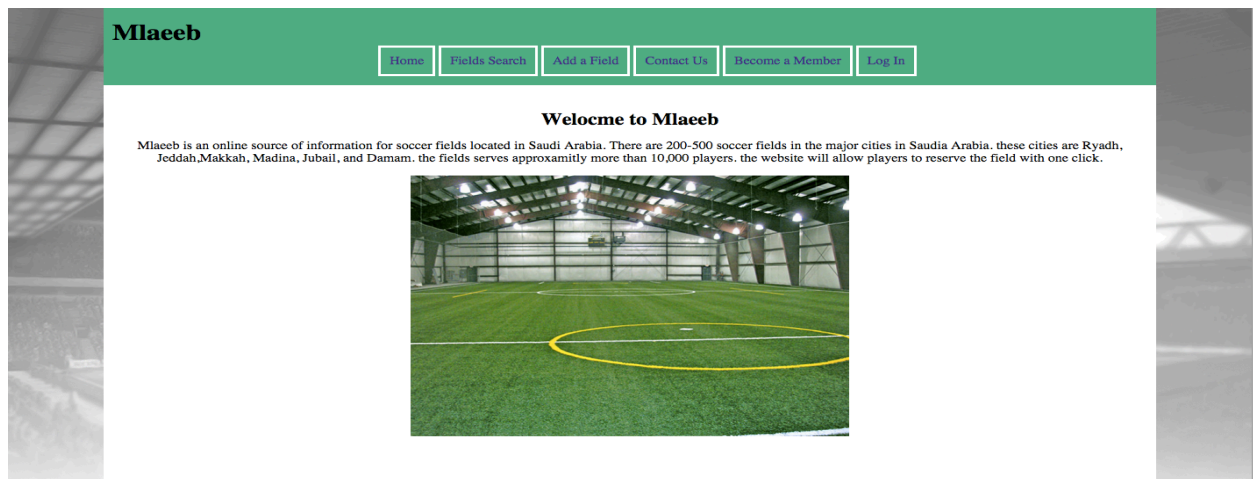
There are several software needed to complete the project. Some of the software are free and some are not. the free software that will be used are the source code software such as Notepad++ for windows, and Brackets for Mac IOS. These two software needed to write the

source codes for the website. In addition, XMAPP will be used to work on the local- server as well as connecting and creating the database using PHP-My-Admin. On the other hand, some software need to be purchased such as Microsoft Word and Access. Microsoft access will be a great resource to create the tables that will go in the website as well as creating the relations between tables. Most of the resources such as XMAPP, Notepad++, and Brackets are available online for free download. For Microsoft products, the license has been purchased and installed in my personal computer and laptop.

Project details

- **Home page**

The website homepage contains an introductory about the website and who made it. In addition, there will be a slide show of the top rated fields in the homepage. The website navigation bar will contain six sections which are (home, field search, add a field, contact us, become a member, and log in).



- **Find a field**

This page will contain an html form connected to the database using PHP. The form will have four options for the customers to search for the fields. These options are field's name, location, price, and area code. After the users enter one or more of the options, they will click

“Search” button to get the fields saved and added in the database. The fields will display a picture and information of the field such as name, description, address, and price.

The screenshot shows the Mlaeeb.com website. At the top is a green navigation bar with links: Home, Fields Search, Add a Field, Contact Us, Become a Member, and Log In. On the left, there is a search form with the following fields: "Search for a field:", "Search by field name:", "Select City:", "Select price:", and "Select Number of Players:". A green "Search" button is at the bottom of the form. The main content area displays two football fields. Each field entry includes a small image of the field, a table with the following columns: Field Name, Location, Number of Players, and Price, and a "SELECT" button. The first field is "Ac Milan" located at "2123 Herah St, Jeddah, Makkah Almokaramah 212315", with "10vs10" players and a price of "400 RS/Hour". The second field is "Catalan" located at "2123 Alzaher, Makkah, Makkah Almokaramah 212324", with "8vs8" players and a price of "350 RS/Hour".

After the customers select the fields, another page will show with more details, pictures, and options about the field. For example, the customers will choose the date from the calendar and the time from the time options available. If the field is available, then the customer will click on the payment button to process the payment. In addition, an “Iframe” element will be used to display the location on google map. According to Duckett (2011), *“An iframe is like a little window that has been cut into your page — and in that window you can see another page. The term iframe is an abbreviation of inline frame”*. (page189)

After the customers click on the payment button, the payment page will appear with the required fields. The required fields are card type, card holder name, card number, expiration date, CVV2, and billing zip code. After the customer click on the reserve button a receipt page will appear with the payment information. In addition, a message will be displayed stating that “a receipt with the reservation date and time is sent to your email”.

- **Add a field page**

This page will allow the owners of the fields to post their property on the website. The form contains form’s fields such as name of the field, location, description, price, and images. This

option is for owners from different areas in the country. After the owners fill out the information, they will submit the form to be posted in the website.

The screenshot shows the Mlaeeb website's 'Enter the field Information' form. The form is titled 'Enter the field Information' and contains several input fields: 'Field Name', 'Description', 'Price', 'Address', 'City', 'Country', and 'Area Code'. Each field has a red asterisk indicating it is required. Below the input fields, there is a 'Select images' section with a 'Choose Files' button and a 'No file chosen' status. At the bottom of the form, there is a checkbox for 'I agree to the Terms and Conditions' and an 'Upload' button. The website's navigation bar is visible at the top, featuring links for Home, Fields Search, Add a Field, Contact Us, Become a Member, and Log In.

- [Contact us page](#)

The contact us page will allow the customers to contact the website manager for any issues they face. Examples of these issues, problem with transactions, refunds, and other technical problems. The page contains the website's contact information such as email, telephone number, and cell phone number. In addition, there will be a form that contains the name of the customer, email, subject, and a text area for the customer to send and describe the problem.

The screenshot shows the Mlaeeb website's 'Contact Us' page. The page is titled 'Contact Us' and features the Mlaeeb.com logo. Below the logo, the contact information is listed: Email: Mlaeeb@gmail.com, Phone: (703)389-5131, and Fax: (703)389-5131. There are input fields for 'Name', 'Email', and 'Subject'. Below these fields is a large text area for the 'Message'. At the bottom of the page, there is an 'Upload' button. The website's navigation bar is visible at the top, featuring links for Home, Fields Search, Add a Field, Contact Us, Become a Member, and Log In.

- [Members page](#)

The members are for customers to be able to enter their information. The information they enter will be name, password, email, and address. The page is made for marketing purposes as well as payment purposes. Only members can reserve the field, so customers are required to create an account. They do not have to enter the contact information again because they have already been saved in the members' database. In addition, it will be used to send offers and promotions for loyal customers.

- [Log in page](#)

After the customers become members, they will log in to the website. The log in page will require user name, and password. The log in page will allow the customer to enter the website and make reservations. It is required for customers to become members in order to make reservations. Otherwise, the customers will not be able to make reservations.

- [User Experience and User Interface](#)

To have a better user experience, the website should take the user side by creating a digestible, clear, trusted, and delight website. A good and simple design will make the users' brain understand what he/she dealing with. It will eliminate any complication that they might face when they want to reserve the soccer fields. The users do not want unorganized looking website that might be hard to use. In this case, I have designed a simple, user-friendly website that will accomplish the owners' and customers' objectives. (Wimberly, 2015)

In order to make the navigation clear and simple to use, the inline navigation bar was created with a clear text guidance. The navigation bar will take the users to the page they want without any difficulties. Designing a better user experience such as labels, language used, and navigation will satisfy the users' needs, because users do not want to deal with complicated interface. (Tollady, 2010)

Designing an effective website require testing the codes more often. In this case every time, I create a page I make sure that it is validated. Because errors in the codes might lead to security problems and it will impact the layout of the website. For example, if the div element for the “Wrapper” is not closed, then the layout of the page will change. In this case, testing early and testing more often will make the website more effective. (Friedman, 2008)

- [Project Progress](#)

So far I have developed and tested five pages of the website. These pages are the home page, contact-us page, field search page, and add field page. On the other hand, the transaction process page, member page, and log in page is not finished yet. In addition, there will be more editing on the design and adding more JavaScript functions such as slide show, and error messages. The other page will be completed before December 10, 2015 for the presentation purposes.

[Knowledge being applied](#)

The knowledge that have been applied came from courses that I have taken at Marymount University. The most important courses that I have taken were IT-125 Web Development, IT-225 Advanced Web Development, and IT-310 Database Technology. These courses were inspirational and improved my skills in web development and database. In addition, there were some classes that improved my writing skills such as Software Engineering and Software Testing. In addition, these two courses gave me an image and understanding about the methods of development and delivering products. Also, it helped with understanding the type of risks that developers might face in the real world. For example, the failures of the project, or the security breaches that might be faced.

The experience I have is not that long, however, I have been doing web development for the Saudi Arabian Military Attaché office for the past two months. I do 20-25 hours a week of

web development by applying my knowledge in HTML, CSS, JavaScript, and PHP. In addition to the internship experience, I worked on projects for IT-125, and IT225 courses. The projects involved developing a website using markup and programming languages. The first project was a website for sports fans. The other project was a rental website for a car company.

Risk factors

- What might impact the website negatively?

There are some risks that might affect the performance of the project. One of these factors is lack of time. The project will not be functionally completed in the end of this semester. The reason is there are other classes that need an amount of work this semester. In addition, the internship requires 240 hours during this semester.

Another factor that might affect the project is competitors that might create a mobile application. A mobile application with the same objectives will be more effective than the website. In this case, if the website became popular, the next step will be creating a mobile app that does the same functionally of the website.

There will be a problem that the field owners might face, which is training or hiring people that can use the computer to manage the reservations. However, the project will not eliminate jobs, because the owners need 1-3 people to manage the reservations. In this case, the project will open job opportunities.

- Security factors

The first security risk that might occur and affect the security of the website is errors in codes. The website has forms that contains owners' and customers' personal information, as well as financial information. If the codes are not written or validated correctly, then the information might be stolen. In this case, as a developer checking, reviewing, and validating the codes will ensure the website's security. (Web Security basics)

SQL injection is one of the security risks that might impact the functionality of the website and lead to hacking personal information. According to Garber and Compton (2014), *“SQL injection attacks are when an attacker uses a web form field or URL parameter to gain access to or manipulate your database. When you use standard Transact SQL it is easy to unknowingly insert rogue code into your query that could be used to change tables, get information and delete data.”* Since the website will contain a lot of data such as personal and financial data, this type of errors in the queries might harm the customers and the website. As a result, the PHP files that contains the queries should be tested more carefully.

(Garber&Compton)

[Work performed by others](#)

There are some resources and software that have been used such as Notepad++ and W3C's HTML and CSS validators. On the other hand, I have developed and wrote the documents of this project with the use of other references such as articles, books, and other technical websites such as W3C. The others' work is mentioned in the text and cited in the references section. In the future, a couple of the tasks will be performed by others, such as marketing the website to soccer fields' owners, and soccer players in Saudi Arabia.

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