**DBMatch.com**

Find your data’s match.

**Market Analysis**

Our product is modeled after an existing concept, but not necessarily one that exists as a web application. One problem with working with databases is they are very technically complex. Designing an infrastructure for data storage is a pretty steep learning curve for the average user or business client. Our application will perform the job that would normally be handled by a database consultant; It will help less technically minded people develop a database design that will work well for the data they need to store. The advantages our application will give them over other options are that it’s far less expensive and gives them a much more active role in designing the data infrastructure - granting them a greater understanding of their own systems.

**User Stories**

***John Smith:***

*John Smith is a new developer just hired by a company to make their software. After realizing that he needs a database, but knows nothing about setting one up, he decides to find out if there is someone online who can do it for him. After some googling, he finds DBMatch.com. On the homepage, he reads about the functionality of the site and decides that it is exactly what he needs.*

*He clicks on the register button to create a new account for himself. He fills in information about his username, email address, and password, as well as payment information to be able to use the site. After the site verifies and registers him, he clicks on the log in button, fills in his username and password, and logs in to the site.*

*Seeing the empty database view, he decides to create a new database by clicking on the button at the top of the page. It takes him to a page where he can select a template to use for his database. After looking at the short descriptions, he clicks on one. This takes him to a page where he can see more information about the template and either select this template to use, or go back to browsing templates.*

*He finally decides on one, and clicks on the create database from template button. It returns him to the database view, where he sees the automatically filled in database view. From there, he clicks on one of the tables in the left column to see what it contains. It brings up a bigger view of the table on the right side, where he can see the table rows, and the type of information contained in each row. He decides that he doesn’t like the name of some of the rows, so he clicks in the editable field and changes it. He clicks on another table to change some things there, but there is a popup message! It asks if he wants to stay on this page and save, or leave it, which of course he wants to save, so he stays on the page and clicks the save button before he leaves for the next table. At this point, he notices that the tables have some different colors on the templates. He realizes that these represent the same data in different tables.*

*After a while, he finds out that he probably needs to make a new table for his information, so he clicks on the plus button on the bottom of the page and creates a new table. Of course this table is empty, so he fills in all the fields and saves the table again. Since he needs information that’s in a different table for this table, too, he clicks on the add foreign key button, which then prompts him for the table and column that he wants to connect the data to. After he saves, it automatically updates with corresponding colors..*

*Finally, he decides that he is done with his database. He clicks on the export button at the top, which gives him two options - create setup script or connect to server and generate database. He clicks on the second option, since he’s not very good with sql. He then enters in the connection information for his company’s database and clicks upload. The database is created on the server, and his company is happy.*

*And he lived happily ever after. The end.*

***Perry Hazard:***

*Perry Hazard recently learned how to create and work with sql, the language of databases. However, that doesn’t mean that he likes it...instead, he’s been using DBMatch.com for all his database creation lately. He’s been working on a new project lately! He clicks on his bookmark for DBMatch.com and goes right to the login button and clicks it. He puts in his username and password, which takes him to the default DBView of one of his databases. Since this isn’t the one he’s working on right now, he clicks on the switch database button at the top of the page to go to the one he is working on.*

*At the current project, he continues to work on the project, editing and adding things as needed. After all the work he’s put in over the last week, he’s finally almost done! He just has to generate the database. He clicks on the export button, which asks him whether he wants to generate a set up script or connect to a server. Due to his company’s policy, he can’t directly connect - instead he clicks on generate setup script, since he knows what to do with that. This brings up a save dialog, which asks him where he wants to save the script. He chooses a location and clicks save. The setup script is generated and sent to his computer, which saves it in his chosen location. He runs the setup script, and it generates the same database that he designed! Extremely happy, he is now able to work with the database, and not have to worry about creating the database script.*

*He and his database fall in love and live happily ever after. The end.*

**Team Strategy**

Ali Persing: Servlet/Controller code, Annotations

Joshua Ellington: Persistence Layer Setup, Regex, Models

Kelsey St Claire: UI/UX Design

Corey Massey: Persistence Layer Connection and Queries, Script Generation

**Projected Schedule**

Week 1

* Complete project proposal
* Basic servlet up and running on a browser
* Set up persistence layer (database for the application)

Week 2

* Connect application to persistence layer
* Data type evaluation
* Build templates

Week 3

* Revisit Design and Release Backlog
* User registration and login completely functional
* Complete .jsp’s

Week 4

* Complete database and set-up script generation
* Get all the code working together

Week 5

* Test
* Test
* Test

**Technical Details**

* Feature List
  + Small
    - Simple visuals to help the user conceptualize the structure of the data
    - User can name tables and fields for their database.
    - Visualize connections from tables by foreign keys.
    - User can log in to site
  + Medium
    - Database templates to get the user started with a structure that is already built
    - Ask and verify sample data which the user enters as the type of data they wish to use for that column.
    - User can create a user account that persists their data. (tables, data fields, etc.)
    - Give the user the ability to create and maintain multiple databases.
  + Large
    - Generates setup scripts for a custom built database
    - Connects to a database using supplied information and generates the database for the client
  + Stretch Goals
    - Host database on our own servers.
    - Display dynamic visual representation of table connections
* Scalability Efforts
  + Security
  + Transactions
  + Loose Coupling
* Platform Support
  + HTML5 enabled browsers
* Mockups



