PokeBuilder

[redacted]

1. Introduction

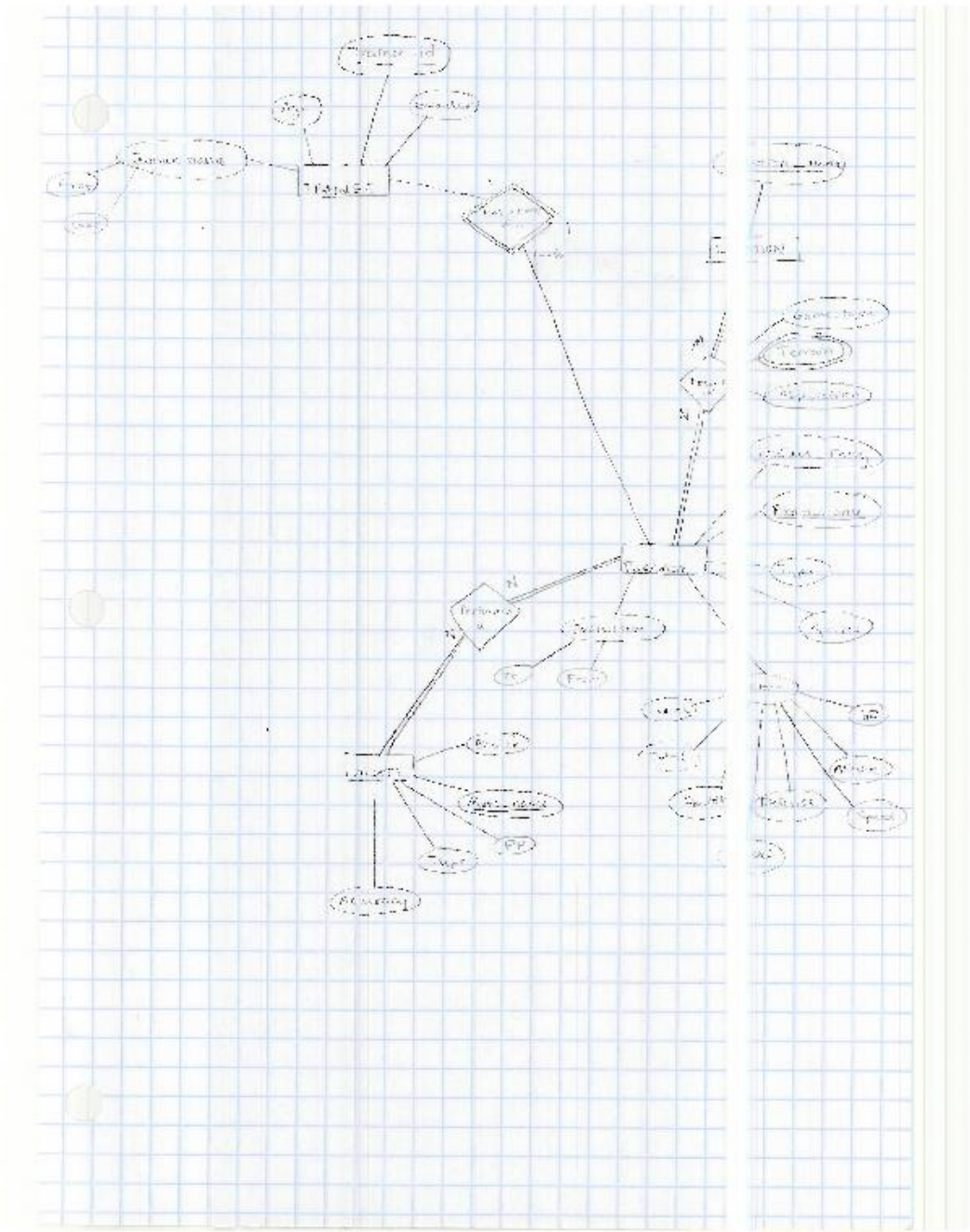
The PokeBuilder is used to create teams of Pokemon for trainers. It is similar to a pokedex in that you can view each Pokemon's stats/type/weakness/etc. but you can also make your own trainer and set up your own team. These teams are viewable by everyone that uses the website.

Some potential users may be people who enjoy playing the Pokemon games, people who want to look up information about a certain Pokemon, or even people who want to strategically set up a team for their game, this way they can document it and share it.

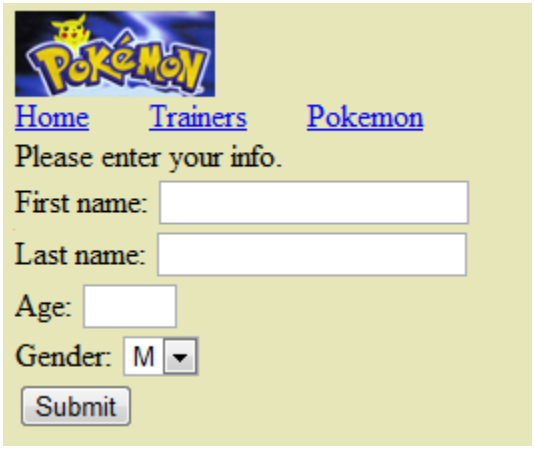
2. Detailed Application Requirements

There must be forms to have 'trainers' fill out with their info (trainers must be over the age of 10, and have a first name), forms to fill out for each team, generally made up of 6 Pokemon. There must be a page to view the Pokemon individually to get more information, and a page to view the teams/trainers.

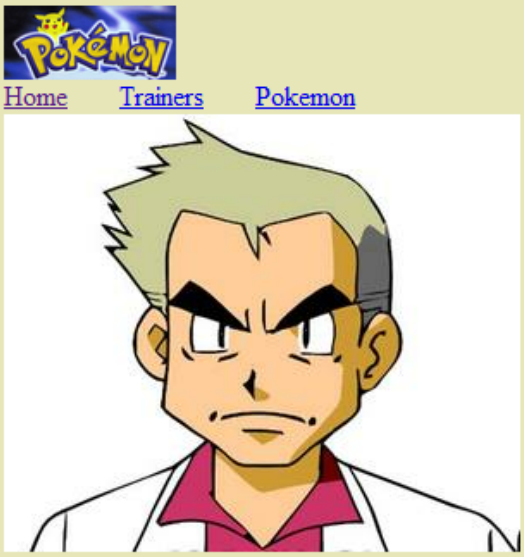
3. Design



The website should be running and available for use at all times, so users can access the data when they choose. It should run at a decent speed, without a lot of load time. The Pokemon data, team data, and trainer data are the main things to be stored. Team data and trainer data are the only new things that should be added to the database by users.



-This is the homepage, a user would enter his/her first name and last name (last name is not required), age and gender, then press the submit button. This is if they want to create a trainer identity to be submitted to the database. If they do not wish to do this, they could select the "Trainers" link, which allows them to view all of the trainers thus far created, or the "Pokemon" link, which allows them to view the Pokedex.



Home Trainers Pokemon

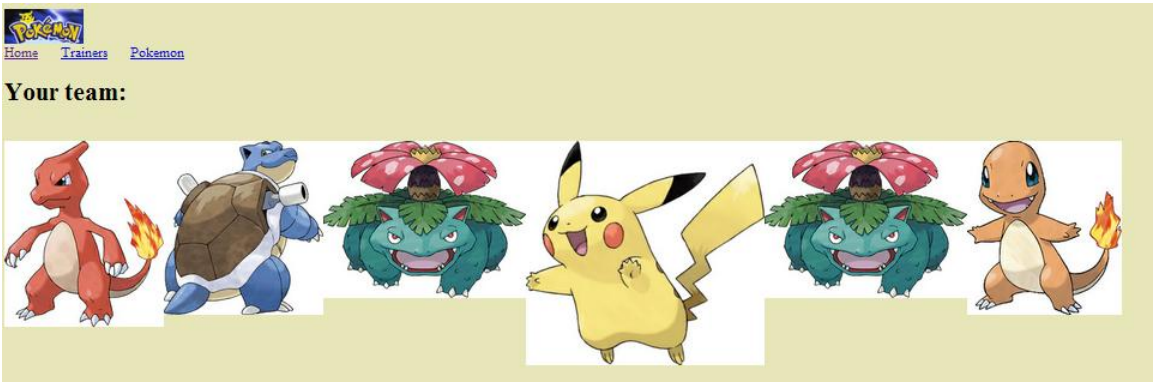
Wait, JarJar,
it's dangerous out there! Assemble your team!

Quick, choose 6 Pokemon for your team!

Pokemon 1: Caterpie
Pokemon 2: Caterpie
Pokemon 3: Venusaur
Pokemon 4: Pikachu
Pokemon 5: Charmander
Pokemon 6: Charizard

Submit

-This is the page that the user would be taken to if they were to create a new trainer identity. Their name appears in the text (ex: JarJar) and they are instructed to create a team. They do so by selecting up to six pokemon from 6 seperate drop down menus. Once they are done, they press the submit button, and the data is stored in the DB. They can also navigate away from this page by clicking the "Home", "Trainers", or "Pokemon" links, explained above.



-This is the page that the user is directed to once they hit the Submit button after selecting their team of Pokemon. It displays their images. Once they are finished looking through their team, they can select any of the three links at the top to navigate away from the page.

First Name	Last Name	Age
David	Merrick	23
Heather	Warman	19
Ash	Ketchum	10
Misty	Cerulean	10
Han	Solo	54
Chewbacca	Test	43
Jabba	the Hutt	43
Jabba	the Hutt	43
Jabba	the Hutt	43
Yoda	Jedi	700
Luke	Skywalker	22
Luke	Skywalker	22
Heather	Warman	19
Heather	Warman	19
Heather	Warman	19

-This is the view of the trainers page, which users can get to by selecting the "Trainers" link at the top of the website. It lists the trainers names, and their ages. Soon there will be the teams of each trainer listed next to their names.

#	Image	Pokemon Name	Type	Species	HP
1		Bulbasaur	Grass	Seed	45
2		Ivysaur	Grass	Seed	60
3		Venusaur	Grass	Seed	80
4		Charmander	Fire	Lizard	39
5		Charmeleon	Fire	Flame	58
6		Charizard	Fire	Flame	78
7		Squirtle	Water	Tiny Turtle	44
8		Wartortle	Water	Turtle	59
9		Blastoise	Water	Shellfish	79
10		Caterpie	Grass	Worm	45
25		Pikachu	Electric	Mouse	45

-This is the page a user would be directed to once they select the "Pokemon" link at the top of the webpage. It lists the Pokemon, their ID, their type, and gives a link that a user can click on if they so choose. This link directs them to each individual Pokemon's web page.

Ivysaur

Pokedex entry:

When the bulb on its back grows large, it appears to lose the ability to stand on its hind legs.
Evolves from:

Evolves to:

- This is the Pokemon's page, specifically Ivysaur here in the photo. It displays the name and picture of the Pokemon, as well as a Pokedex entry describing them. This page also shows who (if any) the Pokemon evolves to and from.

4. Implementation Details

Almost all, if not all, of our application requirements are provided by the DBMS. We use it to link Pokemon with other Pokemon (evolved forms, etc), to allow trainers to create teams, to allow Pokemon to have types/weakness'. Almost all of the data we provide here is connected to so many other ways, that the DBMS is the only way to manage it well.

When a button is clicked, usually it is to finalize the completion of a form (done filling out a team composition for example). This data filled into the form is then submitted to the data via PHP queries. The queries are formed from data submitted inside the form. No indexes are used here to speed up the query execution.

5. Evaluation

We tested the correctness of our system by inputting a lot of example data to make sure we were getting what we wanted. Inputs included random celebrities for trainers, and also SQL injections to test if the inputs were correctly sanitized. There was a lot of trial and error that went into this, and in the long run that is the best way to see if it is working.

6. Future Work

Additional features will include adding a view for each team created by the trainer, so each team can be viewed by everyone else. Stats/weakness will also be added to the Pokemon pages providing more detail about each one.

7. Lessons Learned

Debugging the system brought up some errors/took a long time. It was repetitive having to repost information to the databases after debugging and such. Also in the beginning, figuring out how to link tables like Pokemon and what moves they would have was tricky, but we figured it all out. We just thought the problems through, and tried/researched several ways to go about it and eventually came to a conclusion.

Next time, we could have structured it around an existing Pokemon database so we could spend more time focusing on the relationships of the Pokemon as opposed to entering in all of the data for them individually, it became a little tedious.