

Cloud Application Requirements

- 1. The system shall provide a method to allow users to create accounts**
 - 1.1. The system shall require users to specify a username
 - 1.1.1. The system shall verify that the username is not already taken
 - 1.2. The system shall require users to specify an email address
 - 1.2.1. The system shall verify that the email address is a valid email address
 - 1.2.2. The system shall verify that the email address is not already taken by another user
 - 1.3. The system shall require users to create a password
 - 1.3.1. The system shall require the user to enter the password twice to confirm the password
 - 1.3.2. The system shall provide the option to hide the password characters
 - 1.3.3. The system shall require passwords be strong
 - 1.3.3.1. The system shall require that passwords be at least 15 characters in length
 - 1.3.3.2. The system shall require that passwords contain at least one uppercase letter
 - 1.3.3.3. The system shall require that passwords contain at least one lower case letter
 - 1.3.3.4. The system shall require that passwords contain at least one number
 - 1.3.3.5. The system shall require that passwords contain at least one symbol
 - 1.4. The system shall allow users to select a trainer icon to represent them
- 2. The system shall provide a method to allow users to log in**
 - 2.1. The system shall verify that the username is associated with an active account
 - 2.2. The system shall verify that the password is associated with an active account
 - 2.2.1. The system shall verify that the password is associated with the specific username
 - 2.3. The system shall provide a method to request a password change
 - 2.3.1. The system shall require users enter an email address to request a new password
 - 2.3.1.1. The system shall verify that the given email address is truly associated with the given username
 - 2.3.1.2. The system shall generate a one-time password reset link and send it to the user's email address
- 3. The system shall provide a method for users to display their account information**
 - 3.1. The system shall display the user's username, email, and trainer icon
 - 3.2. The system shall display the user's battle record
 - 3.3. The system shall include a list of user-generated custom Pokémon
 - 3.4. The system shall include a list of user-generated custom teams

4. The system shall provide a method to update user accounts

- 4.1. The system shall allow users to change their trainer icon
- 4.2. The system shall allow users to change their email address
- 4.3. The system shall allow users to change their password
 - 4.3.1. The system shall require users first enter their current password
 - 4.3.2. The system shall then require users to enter the new password twice
 - 4.3.3. The system shall require the new password to meet the same requirements as the initial password generated at the time of account generation (see requirement 1.3.3)

5. The system shall provide a consistent navigation/display experience throughout

- 5.1. The system shall provide a navigation tree on all pages
- 5.2. The system shall locate the navigation tree in the same location on all pages
- 5.3. The system shall use the same color scheme on all pages
- 5.4. The system shall use the same font styles on all pages
- 5.5. The system shall use the same art style for all Pokémon images
- 5.6. The system shall use the same picture sizes for like-elements in the system

6. The system shall provide a method to for users to share their custom Pokémon and teams

- 6.1. The system shall provide an option to mark a custom team as public, making it searchable
- 6.2. The system shall provide an option to make a custom Pokémon as public, making it searchable

7. The system shall provide a method for users to search for specific Pokémon

- 7.1. The system shall allow users to search for Pokémon by name
- 7.2. The system shall allow users to search for Pokémon by number
- 7.3. The system shall allow users to search for Pokémon by type(s)
- 7.4. The system shall allow users to search for Pokémon by ability
- 7.5. The system shall allow users to search for Pokémon by usable moves
- 7.6. The system shall allow users to search for Pokémon by specific stat levels
- 7.7. The system shall allow users to search for Pokémon by the username of the user who created a custom version of that Pokémon

8. The system shall provide a method to display the standard attributes, or ranges of attributes, available to a specified Pokémon

- 8.1. The system shall display the Pokémon's name
- 8.2. The system shall display the Pokémon's number
- 8.3. The system shall display the Pokémon's type(s)
- 8.4. The system shall display the Pokémon's abilities
- 8.5. The system shall display the Pokémon's available moves
- 8.6. The system shall display the Pokémon's base stat levels for all stats
- 8.7. The system shall display the Pokémon's Pokédex entry

9. The system shall provide a method for users to edit and save a custom version of a Pokémon

- 9.1. The system shall allow users to change a Pokémon's ability
 - 9.1.1. The system shall restrict the Pokémon's ability choices to those actually available to the Pokémon in the game
- 9.2. The system shall allow users to change a Pokémon's type
 - 9.2.1. The system shall first verify that the Pokémon in question has different forms with different types
 - 9.2.1.1. The system shall allow users to select which form, and therefore which type(s), they want for the Pokémon from the list of forms actually available to that Pokémon
- 9.3. The system shall allow users to assign four unique moves to a Pokémon
 - 9.3.1. The system shall restrict the available moves for each Pokémon to those moves that the Pokémon is allowed to learn in the games
- 9.4. The system shall allow users to assign an item to the Pokémon for it to hold
 - 9.4.1. The system shall restrict the number of items that a Pokémon may hold at any particular time to one
- 9.5. The system shall allow users to adjust the nature of the Pokémon
- 9.6. The system shall allow users to adjust the effort values assigned to the Pokémon
- 9.7. The system shall allow users to adjust the individual values assigned to the Pokémon
- 9.8. The system shall enable users to save the user's changes as a new instance of the Pokémon to their profile
 - 9.8.1. The system shall automatically generate a unique number for the custom Pokémon
 - 9.8.2. The system shall provide users the option to specify their own nickname for the Pokémon to facilitate future searching/recall of the Pokémon

10. The system shall provide a method for users to create and save a team of 6-Pokémon

- 10.1. The system shall allow users to search for a default (non-customized) Pokémon to assign to each slot
- 10.2. The system shall allow users to select custom Pokémon from their profile to assign to each slot
- 10.3. The system shall generate a unique number to identify the user's team
- 10.4. The system shall provide users the option to assign the team a nickname for facilitate future recall/searches
- 10.5. The system shall verify that the team is a valid team
 - 10.5.1. The system shall prevent users from entering multiple copies of the same Pokémon on the same team
 - 10.5.2. The system shall prevent users from assigning the same item to more than one Pokémon on the same team

11. The system shall provide a method for users to search for specific Pokémon teams that have been marked as public

- 11.1. The system shall allow users to search for public teams by the unique team number assigned at the time of creation
- 11.2. The system shall allow users to search for public teams by the team name
- 11.3. The system shall allow users to search for public teams by the username of the user who created the team
- 11.4. The system shall allow users to search for public teams by the Pokémon on the team

12. The system shall provide a method for users to analyze the strengths and weaknesses of a 6- Pokémon team

- 12.1. The system shall determine the team's net type weaknesses, resistances, and advantages
 - 12.1.1. The system shall count the number of type-advantages that each Pokémon has
 - 12.1.2. The system shall count the number of type-weaknesses that each Pokémon has
 - 12.1.3. The system shall count the number of type-resistances that each Pokémon has
 - 12.1.4. The system shall then match the weaknesses, resistances, and advantages of the individual Pokémon to determine which weaknesses are balanced-out by the strengths/resistances of other members on the team
- 12.2. The system shall return the average base stat total for the team
 - 12.2.1. The system shall calculate the average base stat total by analyzing each Pokémon's base stat total

13. The system shall provide a method for users to observe all of the 4-Pokémon teams that can be generated from a 6-Pokémon team

- 13.1. The system shall receive an input of 6 Pokémon from the user
- 13.2. The system shall display all of the 15 possible combinations of the 4-Pokémon teams that can be generated from a 6-Pokémon team
 - 13.2.1. The system shall display the strengths, weaknesses, and stats for each combination

14. The system shall provide a method for a user to specify an opponent's 6-Pokémon team and then generate the user's optional 6- Pokémon team to use against the opponent

- 14.1. The system shall receive an input from the user of the 6 Pokémon that the opponent will use/is using
- 14.2. The system shall analyze the opponent's team according to the process specified in Requirement 12
- 14.3. The system shall then generate a 6-Pokémon team for the user that has strengths to compliment the opponent team's weaknesses and resistances to compliment the opponent team's strengths, using a similar process to the one

described in Requirement 12

15. The system shall provide a method for users to predict which 4-Pokémon team an opponent will use in a battle against the user, and then to generate the optimal 4-Pokémon team to counter the opponent's expected team

- 15.1. The system shall receive an input from the user of the 6-Pokémon teams that both the user and the opponent will bring to the battle
- 15.2. The system shall analyze the user's team, according to the process described in Requirement 12
- 15.3. The system shall then select the 4-Pokémon team for the opponent that best addresses the user team's strengths/weaknesses, according to the process described in Requirement 13
- 15.4. The system shall finally generate the 4-Pokémon team for the user that best addresses the strengths/weaknesses of the opponent's 4-Pokémon team

16. The system shall provide a method for users to track information that has been revealed during battle, both by the user and by the opponent

- 16.1. The system shall provide a display that includes a section for each battle in a best-of-three Pokémon match
- 16.2. The system shall display the user's and opponent's 6-Pokémon team apart from the displays of the 4-Pokémon teams used in each battle
- 16.3. The system shall have an interface for each battle where the user can input which of the opponent's 6-Pokémon were actually brought into battle
 - 16.3.1. The system shall provide a space to enter the revealed abilities, items, and moves for each Pokémon that the opponent and user bring to the battle