Testing Approach:

Sprint 1:

User Story 1 from sprint 1: *As a user, I would like to be able to play Pokemon Showdown outside of the official webapp, because that will allow me to use third-party apps (AI/bot) to assist in my decision making.*

Scenario:

1. Start a local Pokemon Showdown server
   a. Open a terminal in the poke-env directory
   b. Enter 'node pokemon-showdown start --no-security'
   c. User should see a link to the local server in the terminal
2. Click the link to go to the local server
   a. User should see the Pokemon Showdown website with them as the only user

Sprint 2:

User Story 2 from sprint 2: *As a user, I want to be able to create my own team from my command line client, so that I can set the account up for battling.*

Scenario:

1. Run Main.py
   a. user should be prompted to input a path to a file containing a team
2. Input path to correct team file
   a. user should see the team in packed format printed to the console
3. Start battle
   a. user should see that the bot selected the given team in battle

User Story 3 from sprint 2: *As a user, I want to be able to play a battle against another person from the local client, because then I will be able to battle others using a third-party app.*

Scenario:

1. Have the person login to local client
   a. Users should be able to see each other in the lobby.

2. People can send and receive the challenge like the real pokemon showdown
   a. User can select other user, send the challenge
   b. User who received challenge should be able to see notice from lobby
3. People can do battle like real games.
   a. Selecting a move is feasible.
   b. Swapping is possible.
   c. Ending the game and show the winner

User Story 4 from sprint 2: *As a user, I want to be able to know the possible stats, moves, and other relevant information of a specific Pokemon. This will help me plan out my moves.*

Scenario:

1. Create a Pokedex object
   a. To know the possible stats, moves, and other relevant information of Pikachu
      i. Call get_types with Pikachu to get Pikachu's types
      ii. Call get_baseStats with Pikachu to get Pikachu's base stats
      iii. Call get_abilities with Pikachu to get Pikachu's abilities
      iv. Call get_learnset with Pikachu to get Pikachu's learnset
      v. User should see the possible stats, moves, and other relevant information of Pikachu

User Story 5 from sprint 2: *As a user, I want to be able to easily configure the client, so I can conveniently change my username, password, preferences, etc. without having to go into the source code.*

Scenario:

1. Centralize all account and client parameters in one file.
   a. User can view and modify all values in one configuration file
   b. User name =
   c. Password =
   d. Client port =
2. Find and read configuration file parameters in source code
   a. Config.username when reading username from configuration

User Story 6 from sprint 2: *As a user, I want to be able to play against a computer that selects the first move every turn, so I can practice against an easy opponent.*

Scenario:

1. Run Main.py
2. Go to Pokemon Showdown website
3. Press find user and type in name of bot
   a. User should see that the account is online

4. Select challenge
    a. User should see a battle start between themselves and the bot
    b. User should be able to successfully finish the battle against the bot
    c. User should see the bot choosing the same move over and over

Sprint 3

User Story 7 from sprint 3: *As a user, I want to be able to play against a computer that selects random moves, so I can practice against an easy opponent.*

User Story 8 from sprint 3: *As a user, I want to be able to play against a computer to be able to recognize out of a list of moves which would deal the most damage, so that I can practice against a moderately difficult opponent.*

User Story 11 from sprint 3: *As a user, I want to be able to select a wide range of difficulties for the AI, so that I can have a bot tailored to my strength of play*

Scenario:

1. Run login.py from the poke-env folder
    a. User should see a list of difficulty options presented on the command line
2. Select Random Bot or Max Damage Bot
    a. User should see 'Awaiting challenge' message printed
3. Go to Pokemon Showdown website
4. Press find user and type in name of bot
    a. User should see that the account is online
5. Select challenge
    a. User should see a battle start between themselves and the bot
    b. User should be able to successfully finish the battle against the bot
    c. If Random bot was selected, bot should be making random moves
    d. If Max Damage Bot was selected, bot should be making the same damaging move repeatedly

Sprint 4

User Story 9 from sprint 4: *As a user, I want to play against a computer that uses reinforcement learning, so that playing against the AI would be more challenging and a better learning experience.*

Scenario:
1. Run login.py from the poke-env folder
    a. User should see a list of difficulty options presented on the command line
2. Select Reinforcement Learning Bot
    a. User should see 'Awaiting challenge' message printed

3. Go to Pokemon Showdown website
4. Press find user and type in name of bot
    a. User should see that the account is online
5. Select challenge
    a. User should see a battle start between themselves and the bot
    b. User should be able to successfully finish the battle against the bot
    c. User should see the bot making decisions based on what it has learned.

User Story 10 from sprint 4: *As a user, I want to play against a computer that will swap its pokemon out if it feels the matchup is bad for it's current pokemon.*

Scenario:
1. Run login.py from the poke-env folder
    a. User should see a list of difficulty options presented on the command line
2. Select Max Damage Bot
    a. User should see 'Awaiting challenge' message printed

3. Go to Pokemon Showdown website
4. Press find user and type in name of bot
    a. User should see that the account is online
5. Select challenge
    a. User should see a battle start between themselves and the bot
    b. User should be able to successfully finish the battle against the bot
    c. If Max Damage Bot was selected, bot should switch pokemon it's current pokemon is at a type disadvantage