Assignment 4

1. Use Form.html code to do the assignment.
2. Add validations for the form for all the fields.
   a. Not null
   b. Min length
   c. Max length
   d. Fields with alphanumeric should not accept special characters.
3. Submit button should be disabled until all validations on the fields are passed.
4. Use regex to validate phone number, email and zip code.
5. Validation should be on the key events NOT at the end when submit button is pressed.
6. Create a single select list box which has 5 elements
7. Write an onChange event for the created list which adds a new checkbox below the list that changes dynamically for each selected item from the list.
8. Example:

Drinks

Hot Black Tea - Keemun

☐ Large drink (75¢ extra)

9. If the checkbox is enabled, add a text field and make it mandatory and on disabling checkbox, text field should disappear.
10. On submit, create a html table below on the same page which takes all the data from the previously submitted form and display results. (Previous Data should be captured as well)
11. On submit, make sure all the form fields get cleared out
12. Add validation for email address (restrict the domain to @northeastern.edu)
13. Add new field Street address 2 which is not a mandatory field, on submit click if the field is blank then its value in the table should be blank as well.

Additional Key Features to implement

1. Input Masking:
   Add input masking for the phone number field to enforce a specific format (e.g., (XXX) XXX-XXXX) while typing. The user will enter numeric values and dynamically the input will be formatted in given format while typing

   Phone Number: (123) 456-7890

2. Dynamic Error Highlighting
   Validation should show a red color text along with each field and disappear on correcting particular field
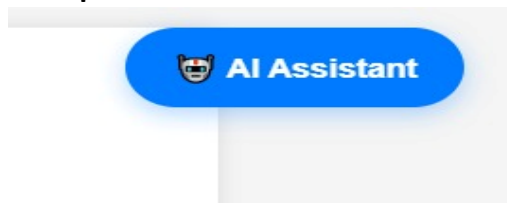
3. Live Character Counter for Text Fields (Only for Address 2 Field)
   Add a live counter below the input (e.g., "15/20 characters used"). The counter should update based on the characters added and removed

4. Form Helper (AI-Style FAQ Chatbot)
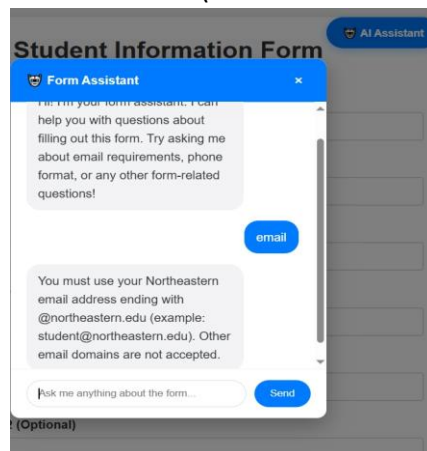
1. Add the AI Assistant Button

- Create a button called **"AI Assistant"**.
- Place it **above the form** or in the **top-right corner of the page**.
- Important: Do not place it below the form, because the results table will appear there after submitting.
  Example:

2. Open a Chat Window

- When the button is clicked, a **chat window** should appear on the page.
- The chat window should be **small and simple**, with:
  - A message area (to show the conversation)
  - An input box (where the user types a question)
  - A send button (or allow Enter key to send)

3. Pre-Defined FAQs (at least 5)

- The chatbot does not need to be "real AI."
- Instead, it should answer **pre-defined questions** related to your form.
- Example questions and answers:
  1. **Q:** What email can I use?
     A: You must use your Northeastern email (example: student@northeastern.edu).
  2. **Q:** What format should the phone number be?
     A: The phone number must be in the format (XXX) XXX-XXXX.
  3. **Q:** How many digits should the zip code have?
     A: The zip code must be exactly 5 digits.

4. **Q:** Which fields are required?
   A: All fields are required except Street Address 2.
5. **Q:** Is Street Address 2 mandatory?
   A: No, it is optional. If left blank, it will remain empty in the results table.

4. How It Should Work

- When the user types a question, the chatbot should **look for keywords** (like "email," "phone," "zip," "required," or "address").
- If a keyword is found, the chatbot should **display the matching answer**.
- If the chatbot cannot find a match, it should show a default reply like:
  "Sorry, I don't know that yet. Please check the instructions."

5. Keep the Conversation

- The **chat history** should stay visible in the chat window until the user closes it.
- This way, users can see both their questions and the answers.

Assignment must be submitted on your **PRIVATE GitHub account (use Northeastern email account)** and **zip** file must be submitted on **CANVAS** and GitHub URL of assignment in the canvas remarks