

CSC 642-848 HCI class SFSU
Forms assignment
Fall 2016
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Introduction

The form documented by this report is intended to be used for reporting problems at a college university. A user who needs to create a maintenance request should be able to use this form to confidently and accurately describe the problem. The primary means for using the form are at a computer. However, this is not practical for all situations so the report form must be usable on mobile devices as well. This report will cover the UI Design Principles and Patterns used in the forms design and present screenshots of the form on both PC and mobile. Then this report will verify adherence to HTML coding standards by using a code verifier. A QA test will be presented then a Usability Test will be outlined to test whether the form is usable.

UI Design Principles and Patterns Used

Some of the design principles used in this form were alignment and grouping. The labels for the field sections are on the left so that there is a visual break between the field entry forms and the sections. These section headers are aligned so to create clear division between sections. The fields are also aligned and the same length so the eye does not have to jump across the page to make sense. Entry fields are grouped together based on their relevancy to each other. These are then put under their related section header.

The verify and submit buttons are green to help with familiarity. The user is accustomed to green being a “go” or continue button indicating success. The red cancel button on the verification page is red as the user is familiar with red being a negative color. The cancel button is added so that the user has an option other than the back button to change their information. The verification fields also use a green and red color scheme to indicate valid and invalid input formats. The field labels are clear and visible, with the required fields indicated with a red asterisk. This asterisk is another concept frequently prevalent on forms and also increases the familiarity the user has with the fields. Along with aiding in familiarity the color of the asterisk contrasts the black and white colors on the form so that required fields stand out without being overbearing.

The labels for fields are aligned and clear with the entry forms providing contextual placeholders to help the user know what to enter. The font size is large and the entry fields are large enough to provide ease of use on mobile. The form is in a single column so that the user does not become confused with where information goes. In the case of invalid input, relevant error messages pop up in red next to the field. If the user submits a form without filling in all the required fields the form does not delete all valid fields while jumping to the invalid section. The checkbox for the Terms and Conditions is not modified so the user will not be confused with the checkbox state nor will the checkbox UI render strangely on other browsers but instead use their default checkboxes.

Screenshots of the Final Version of the Form

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All fields marked with (*) are required.

Contact Information

First Name: *	<input type="text" value="First Name"/>
Last Name: *	<input type="text" value="Last Name"/>
Gender:	<input type="text" value="Omit my gender"/>
Highest Education:	<input type="text" value="Omit my education"/>
Phone Number: *	<input type="text" value="(xxx)xxx-xxxx"/>
E-Mail: *	<input type="text" value="E-Mail Address"/>

Incident Information

Date: *	<input type="text" value="DD/MM/YYYY"/>
Category: *	<input type="text" value="Please select a category"/>
Description:	<input type="text" value="Optional description of up to 200 characters."/>
Upload Image:	<input type="button" value="Choose File"/> No file chosen

Location

Street Address: *	<input type="text" value="123 Example Dr."/>
City: *	<input type="text" value="San Francisco"/>
State: *	<input type="text" value="Please select your state"/>
Zip Code: *	<input type="text" value="94132"/>

☐ * I agree with the [Terms and Conditions](#).

Figure 1: Form Field Entry Screenshot PC

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Please Verify Your Submission

Contact Information

First Name: *	<input type="text" value="Jane"/>
Last Name: *	<input type="text" value="Doe"/>
Gender:	<input type="text" value="Omit my gender"/>
Highest Education:	<input type="text" value="Omit my education"/>
Phone Number: *	<input type="text" value="1234567890"/>
E-Mail: *	<input type="text" value="janedoe@gmail.com"/>

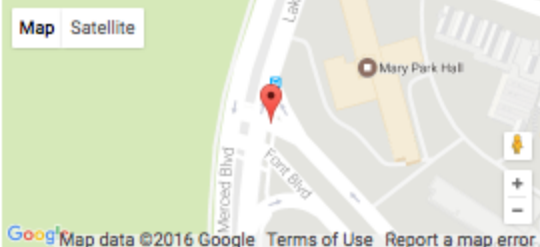
Incident Information

Date: *	<input type="text" value="07/08/2015"/>
Category: *	<input type="text" value="Broken Pipe"/>
Description:	<input type="text"/>
Upload Image:	<input type="text" value="IMG_1394.JPG"/>

Location

Street Address: *	<input type="text" value="750 Font Blvd"/>
City: *	<input type="text" value="San Francisco"/>
State: *	<input type="text" value="California"/>
Zip Code: *	<input type="text" value="94132"/>

Map Satellite



Map data ©2016 Google [Terms of Use](#) [Report a map error](#)

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Cancel

Submit

Figure 2: Verification Screen PC

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Please Verify Your Submission

Contact Information

First Name: *

Last Name: *

Gender:

Highest Education:

Phone Number: *

E-Mail: *

E-Mail: *

Incident Information

Date: *

Category: *

Description:

Upload Image:

Location

Street Address: *

City: *

Figure 3: UI Mobile Screenshots

700 FOM DR


City: *
San Francisco

State: *
California

Zip Code: *
94132

Map

Satellite



☒ * I agree with the [Terms and Conditions](#).

Cancel

Submit

SFSU CS Department - CSC 642 Fall 2016 project: Form UI

All fields marked with (*) are required.

Contact Information

First Name: *
Jane

Last Name: *
Doe

Gender:
Female

Highest Education:
Omit my education

Phone Number: *
1234567890

Figure 4: UI Screenshots of Mobile Version

E-Mail: * <input type="text" value="janedoe@gmail.com"/>	<input type="text" value="Broken Pipe"/>
Incident Information	Description: * <input type="text" value="Optional description of up to 200 characters."/>
Date: * <input type="text" value="07/08/2015"/>	Upload Image: Choose File IMG_1394.JPG
Category: * <input type="text" value="Broken Pipe"/>	Location
Description: <input type="text" value="Optional description of up to 200 characters."/>	Street Address: * <input type="text" value="750 Font Blvd"/>
Upload Image: Choose File IMG_1394.JPG	City: * <input type="text" value="San Francisco"/>
Location	State: * <input type="text" value="California"/>
Street Address: * <input type="text" value="750 Font Blvd"/>	Zip Code: * <input type="text" value="94132"/>
City: * <input type="text" value="San Francisco"/>	<input checked="" type="checkbox"/> * I agree with the Terms and Conditions .
	<input type="button" value="Verify"/>

Figure 5: UI Mobile Screenshots

Implementation: HTML Code verification

In order to comply with both Safari and Chrome browsers Bootstraps base cross-browser compatibility was used. No custom CSS was used in order to simplify the code and also ensure that verified Bootstrap CSS was not overwritten. As this was a rather small form, base Bootstrap was enough to organize content and provide a usable UI for users.

The HTML code validator used for testing can be found at: <https://validator.w3.org/>

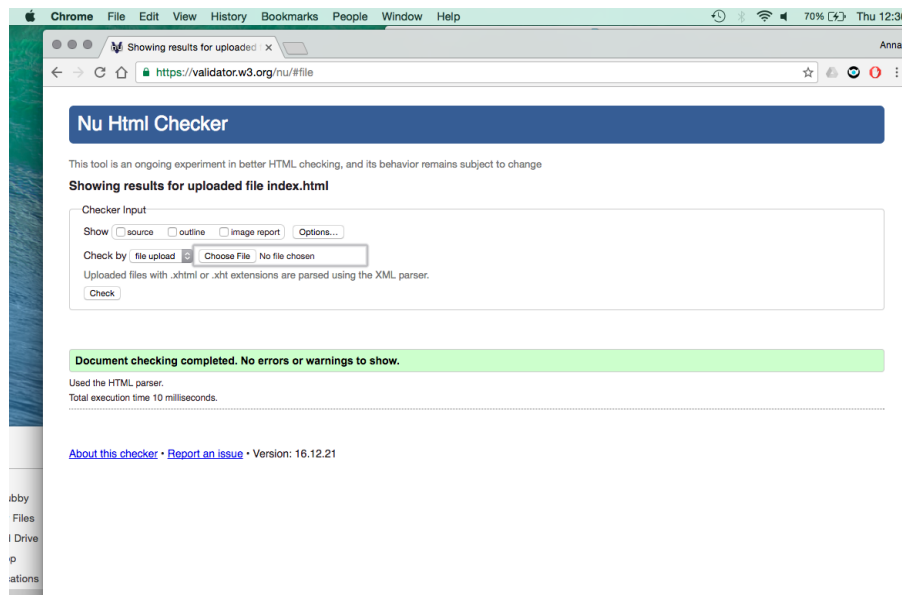


Figure 6: Chrome Browser Validation Confirmation

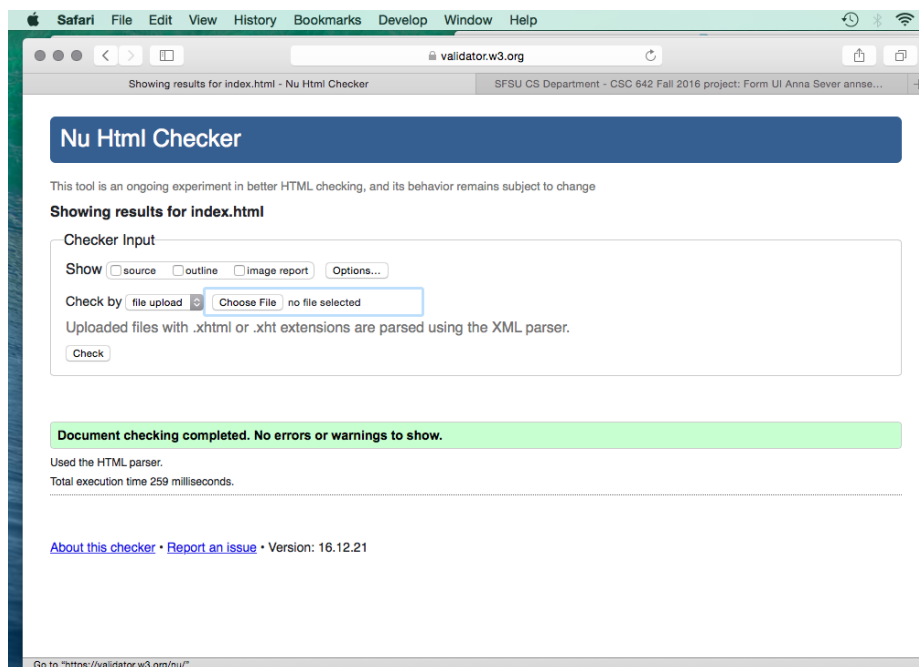


Figure 7: Safari Browser Validation Confirmation

Correctness of Operation - QA – Functional Test

Test #1: Email Format Verification

Description: The aim of this test it to verify that Emails are processed and verified correctly. The tester will enter test@test@test.com and expect invalid input from the email portion of the form.

Test #2: Phone Number Format

Description: Test the number of digits accepted in phone number verification. The tester will enter (123)456-789 into the phone field and expect an invalid phone number feedback from the system.

Test #3: Incident Description Character Limit

Description: Test the amount of characters permitted in the description field of the problem. The tester will enter: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas cursus semper pellentesque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Suspendisse potenti." into the description field and should receive an error.

Test #4: Date Format Verification

Description: Test the verification of submitted dates. Tester will enter 12/14/2016 and expect and error.

Test #5: Terms and Conditions

Description: Terms and Conditions shall be mandatory for form submittal. Tester will uncheck Terms and Conditions and expect to be unable to submit form.

Test #:	Title	Input:	Desired Output	Result
1	Email Format Verification	test@test@test.com	Invalid Email Format	PASS
2	Phone Number Format	(123)456-789	Invalid Phone Format	PASS
3	Incident Description Character Limit	Loren ipsum... of (greater than 200 characters)	Invalid Description Length	PASS
4	Date Format Verification	12/14/2016	Supply a valid date.	PASS
5	Terms and Conditions	Leave Terms and Conditions unchecked	Unable to submit form	PASS

Browsers System Tested on: Firefox, Chrome, Safari

