

CS5760: Usability Testing Plan

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Table of Contents

Table of Contents	2
Test Scenario 1	3
Description.....	3
Participant Instructions.....	3
Trials.....	3
Test Scenario 2	8
Scenario Description.....	8
Participant Instructions.....	8
Trials.....	8
Goals	8
Test Scenario 2.....	9
Software/Equipment Required	9
Quantitative Measurements	9
Test Scenarios.....	9
Task List	9
Qualitative Measurements	9
Test Scenarios.....	9
Bug Report Form	10
Post-Scenario Questionnaire	11
Interview Questions	13
Test Set-Up Details	14

Test Scenario 1

Description

This scenario consists of ten trials for the participant to complete. The trials will get more and more difficult. Each trial will consist of a vague instruction to create a simple or complex regular expression. Laura will be conducting this scenario for her 8 participants.

Participant Instructions

Thank you for coming in today. By being here, you are consenting to participate in our usability testing on a website involving regular expressions. You will be tasked with creating strings and testing regular expressions using a case matching function. When you are finished with each trial, clearly state "I'm done". If you have questions during each trial, we ask that you first check the tutorial before asking us. You will have three minutes to complete each trial and will not be graded on accuracy. After we finish with the application, there will be a brief survey. At this time, I am happy to answer any questions you may have. If not, we should be finished with the testing within the hour.

Zoom will be used to record the screen as you complete the trials. Please open Zoom on your laptop and connect to the meeting with the ID: **357 239 7082**. Once that is done and you are ready, I will hand you the instructions for your first trial.

After 5 trials, do talk-aloud

For the next few trials, we want you to tell us step-by-step what you are doing as you do it.

Trials

1. **Name:** Text Block

Instruction:

Use a Text Block to generate a regex string to capture the literal string of "Apple".

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
Apple	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



2. **Name:** Start Block

Instruction:

Generate a regex to capture any string that starts with 'a'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
ab	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



3. **Name:** End Block

Instruction:

Generate a regex to capture a string that ends with 'b'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
ab	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



4. **Name:** Repeat Block

Instruction:

Generate a regex to capture a string with any number of the letter 'a'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
aaaaaa	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



5. **Name:** Include Whitespace

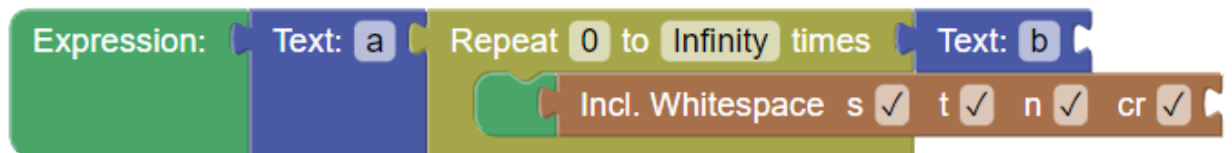
Instruction:

Generate a regex to capture a string that has any number of whitespace between the letter 'a' and the letter 'b'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
a b	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



6. **Name:** Start + Repeat + End

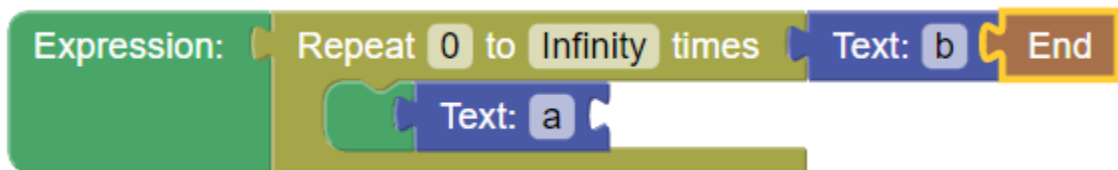
Instruction:

Generate a regex to capture a string that starts any number of 'a' and ends with 'b'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
aaaaaab	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



7. **Name:** Or - Start + End

Instruction:

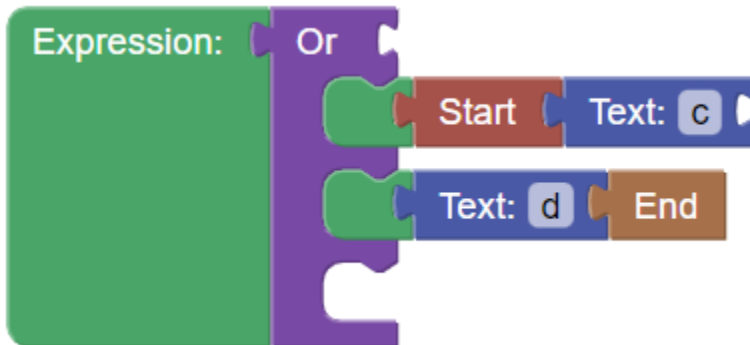
Generate a regex to capture a string that starts with 'c' or ends with 'd'.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

add	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Expected Solution:



8. **Name:** Repeat - Anything + Include Number

Instruction:

Generate a regex to capture strings that include a number somewhere after the first character.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
I have a 1 for you.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:



9. **Name:** Repeat - Exclude + End

Instruction:

Generate a regex to capture any string that ends with 'c' and contains no numbers.

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
I do not have a number, c	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I have a 1 for you.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Expected Solution:

Expression: Repeat 0 to Infinity times Text: c End

Exclude a-z A-Z 0-9

10. **Name:** Match a sentence

Instruction:

Generate a regex to capture any string that starts with "This", does not contain capital letters after "This", and ends in "1".

Match Case(s):

Text to Match	Should Match	Shouldn't Match	Actual Result
This is the hardest 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓
This is NOT the hardest 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✗
This is the hardest one	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✗

Expected Solution:

Expression: Start Text: This Repeat 0 to Infinity times Text: 1 End

Exclude a-z A-Z 0-9

Test Scenario 2

Scenario Description

This scenario consists of five trials for the participant to complete. Each trial will consist of a vague instruction to create a simple or complex regular expression. Brandon will be conducting this scenario for his 8 participants.

Participant Instructions

Thank you for coming in today. By being here, you are consenting to participate in our usability testing on a website involving regular expressions. You will be tasked with creating strings and testing regular expressions using a case matching function. When you are finished with each trial, clearly state "I'm done". If you have questions during each trial, we ask that you first check the tutorial before asking us. You will have three minutes to complete each trial and will not be graded on accuracy. After we finish with the application, there will be a brief survey. At this time, I am happy to answer any questions you may have. If not, we should be finished with the testing within the hour.

Zoom will be used to record the screen as you complete the trials. Please open Zoom on your laptop and connect to the meeting with the ID: **474 151 4369**. Once that is done and you are ready, I will hand you the instructions for your first trial.

After 5 trials, do talk-aloud

For the next few trials, we want you to tell us step-by-step what you are doing as you do it.

Trials

The trials have the same content and instructions as Test Scenario 1 (see previous 2 pages). However, the order in which the trials are administered are randomized. This means that each participant who gets Test Scenario 2 may have a different order than the other participants who get Scenario 2.

After 5 trials, do talk-aloud

For the next few trials, we want you to tell us step-by-step what you are doing as you do it.

Goals

These first goals are the same for both scenarios.

1. Determine how easy the interface is to understand - Progressively harder scenarios should provide a strong metric.
2. Identify major issues with the prototype to be altered for the next iteration.

3. Understand how users can navigate the app without the existence of a tutorial.

Test Scenario 2

1. This scenario has the additional goal to see whether or not the order of “progressively more difficult” has an impact on the user’s learning experience.

Software/Equipment Required

It is the same for both test scenarios.

1. A laptop/computer with internet capabilities
2. Zoom (application) with screen-record capabilities
3. Access to the web application

Quantitative Measurements

Test Scenarios

1. **Time to complete test scenarios**
2. Number of resets on test scenarios
3. Number of test scenarios completed
4. Number of unnecessary blocks
5. Number of glances at the tutorial
6. Number of sighs
7. Number of complaints

Task List

1. Participant reads the vague instructions for the first trial.
2. Participant experiments with blocks until they get what they think is the correct combination.
3. Participant declares they are done with that trial.
4. This process repeats for all five trials.

Qualitative Measurements

Test Scenarios

1. How tense does the participant look
2. Facial expressions throughout task

Post-Scenario Questionnaire

Post test questions (given after the all the trials are completed):

1. Please indicate your level of agreement to the follow statement:

Overall, this application was easy to perform each task.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. Please indicate your level of agreement to the follow statement:

I enjoy using this application.

Very Much A Little Bit Neutral Not Very Much Not At All

3. Please indicate your level of agreement to the follow statement:

I would use this application again.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. Please indicate your level of agreement to the follow statement:

The text on the application was easy to read.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. Please indicate your level of agreement to the follow statement:

The tutorial was helpful in understanding the application.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

6. Please indicate your level of familiarity with regular expressions BEFORE you arrived here, today:

Very Much

A Little Bit

Neutral

Not Very Much

Not At All

7. What class year are you? _____

Interview Questions

1. Did working with this app improve your understanding of regular expressions? If so, how?
2. How did the tasks make you feel?
3. What was the most frustrating part?
4. What did you feel was the easiest part?
5. If you used the tutorial, did you find it helpful?

Test Set-Up Details

1. A computer with access to the web application
2. Set-up Zoom and screen record
3. Paper/pencil materials printed and ready for administration.