Test Plan

For KDD- Service based Numerical Entity Searcher

(KSNES)

Version 1.0

Submitted in partial fulfillment of the Masters of Software Engineering degree.

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# Change Log

<table>
<thead>
<tr>
<th>Version #</th>
<th>Changed By</th>
<th>Release Date</th>
<th>Change Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 1.0</td>
<td>Sowjanya</td>
<td>03/19/09</td>
<td>Initial Release</td>
</tr>
</tbody>
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1. Test Plan Identifier

KSNES-Validation-V-1.0

2. Introduction

The document provides the methods that will be used to test the KSNES. The project allows
the user to give in the raw text and presents the numbers, units and the dates, if any, in the
given input. The data analyzed is displayed on the webpage for the user to view it. Each task
is treated as a separate module of the system and will be tested with respect to the associated
requirements described in the vision document.

2.1. References

Project webpage: http://people.cis.ksu.edu/~sowji/100jiMSE/

[2] Davis, E. Test Plan 1.0. Retrieved 03/19/2009 from Eric Davis’s MSE Project webpage:

3. Test Items

The following items will be tested:

- General Application Related Items

4. Tested Features

All features listed below will be tested. The features can be found in [1]

4.1. General Application Related Items

- **ARI 1** - The program shall provide a GUI for the user interaction.
- **ARI 2** - The application shall execute in a single step with no user interaction.
• **ARI 3**- The application shall start when user enters the text into the text box in webpage.
• **ARI 4**- The application shall invoke the other modules of the project when the user clicks on the send button.
• **ARI 5**- The system will be setup as a service accessible over the K-State network.
• **ARI 6**- The user shall be able to view the chunked output on the webpage.
• **ARI 7**- The user shall be able to stop the running of the application after viewing the output by closing the web browser.
• **ARI 8**- The user shall be able to run the application again with a new input once the previously entered text is chunked.
• **ARI 9**- The user shall be able to enter the input of any size.

5. Features not to be tested

Testing on the following requirements will not be tested because certain parts of the system are adopted from third parties who have already tested the systems. Most part of the system is a black box to the user and hence a tester will not be testing it. The system will be tested by the developer while developing the system.

5.1.POS Tagger Items

• **PTRI 1**- The POS Tagger shall be given the raw input text that user enters on the webpage.
• **PTRI 2**- This POS Tagger shall be a service request from the main webpage.
• **PTRI 3**- The POS Tagger shall be able to tokenize the given text.
• **PTRI 4**- The POS Tagger shall be able to tag the words, punctuations and symbols in the sentence using the Penn Treebank Tag set.
• **PTRI 5**- The POS Tagger shall be able to produce the tagged sentence. This is a critical requirement because the module should be producing the expected output.
• **PTRI 6**- The POS Tagger shall be able to send the tagged sentence to the next module which is the Numerical Phrase Extractor.

5.2.Numerical Phrase Extractor Items

• **NPERI 1**- The Numerical Phrase Extractor shall be able to take the tagged sentence from the POS Tagger.
• **NPERI 2**- The Numerical Phrase Extractor shall be able to identify the tagged words that may be containing the numbers and the units.
- **NPERI 3-** The Numerical Phrase Extractor shall be able to identify the tagged words that may be containing the dates.
- **NPERI 4-** The Numerical Phrase Extractor shall be able to produce the filtered number-unit or the date phrase.
- **NPERI 5-** The Numerical Phrase Extractor shall be able to send the filtered phrase to the next module which is the Number-Unit/Date Pattern Recognizer.

5.3. Number-Unit/Date Pattern Recognizer Items

- **NDPRRI 1-** The Number-Unit/Date Pattern Recognizer shall be able to take the extracted phrase from the Numerical Phrase Extractor.
- **NDPRRI 2-** The Number-Unit/Date Pattern Recognizer shall be able to identify the numbers, units and unit-type if present in the phrase.
- **NDPRRI 3-** The Number-Unit/Date Pattern Recognizer shall be able to identify the date, month and the year if present in the given phrase.
- **NDPRRI 4-** The Number-Unit/Date Pattern Recognizer shall be able to produce the number, unit corresponding to it and the type to which the unit belongs to if it’s a number phrase. And if it is a temporal phrase then the module should be able to display the date based on the number, month and year information in the phrase.
- **NDPRRI 5-** The Number-Unit/Date Pattern Recognizer shall be able to display the value, unit, and unit-type to the user on the webpage.

6. Approach

Testing will be done by running KSNES in a separate series of actions. The sequence of actions, expected result and the requirements of each test case is mentioned.

7. Item Pass/Fail Criteria

A test case is said to be passed if it meets the requirements in the vision document and it is considered to be failed if does not meet the requirements described in the vision document.

8. Suspension Criteria and Resumption Requirements

8.1. Suspension Criteria
Testing will be halted if a test case fails while testing. The reason for the failure and a suggested solution will be logged near the test case.

8.2. Resumption Requirements

The failed test cases will be rerun from the beginning of the test after logging the test in the test log with the possible solution to the problem. Other independent test cases are run parallel with the effort to fix problems that occur in independent areas.

9. Test Deliverables

The provided Test Log will document all the test cases and record if the test case is passed or failed. Comments will be added when a test case has failed and the reason and the solutions are documented.

10. Testing Tasks

10.1. Test Case 1: Application Items

<table>
<thead>
<tr>
<th>Step#</th>
<th>Action Performed</th>
<th>Expected Outcome</th>
<th>Requirements Met</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tester opens the webpage in a browser</td>
<td>Observe the KSNES webpage open</td>
<td>ARI 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tester sees a text box, send button</td>
<td>ARI 2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Enters the text in the box and clicks the send button to send the request to the service</td>
<td>Observes the raw text to be sent by the tester on clicking the send button</td>
<td>ARI 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The request is sent to the server</td>
<td>ARI 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ARI 5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The tester views chunks, value, units and unit type on the webpage</td>
<td>The output is seen on a webpage explaining the chunks, values, units and unit-types</td>
<td>ARI 6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The tester may close the browser in between or after viewing the output</td>
<td>The application stops and the browser closes</td>
<td>ARI 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The tester may enter a new input again</td>
<td>The text box appears again for the user allowing to give a new input</td>
<td>ARI 8</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The tester may enter the input string of any length</td>
<td>Tester enters the string of any length</td>
<td>ARI 9</td>
<td></td>
</tr>
</tbody>
</table>