Unit Enrolled: INN370 - Software Development
Assignment 2
Test-Driven Development and Graphical User Interface Programming
Semester 1, 2014

NGRAM GUI TEST CASES

AUTHOR:

1) **NAME:** KAUSHIK MUTHUKRISHNAN SIMILI

Student No.: n9000348

NGramGUI.java Testcases

Positive GUI Test Scenarios:

Test Case 1:

Input Search Text: to be

Number of Suggestions specified by the user: 4

1. The user inputs a search string "**to be or**" and specifies the number of suggestions as **4**.

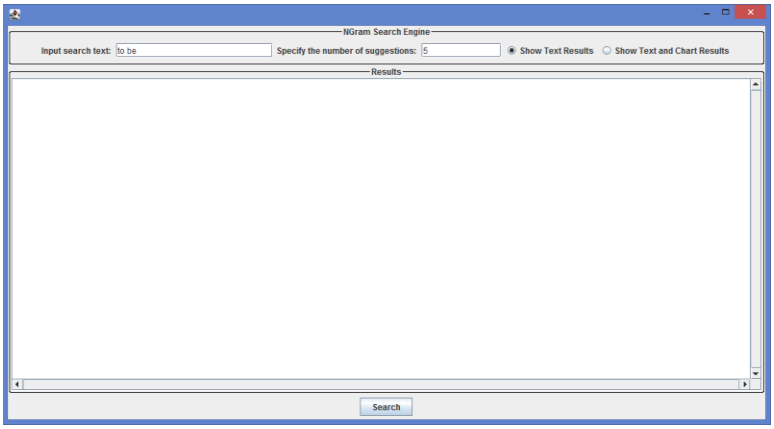
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable as shown in the **Screenshot 1**.

3. The user then clicks on the "**Search**" button on the GUI, by which the application shows as "**Searching…**" and the GUI is not blocked as shown in the **Screenshot 2**.

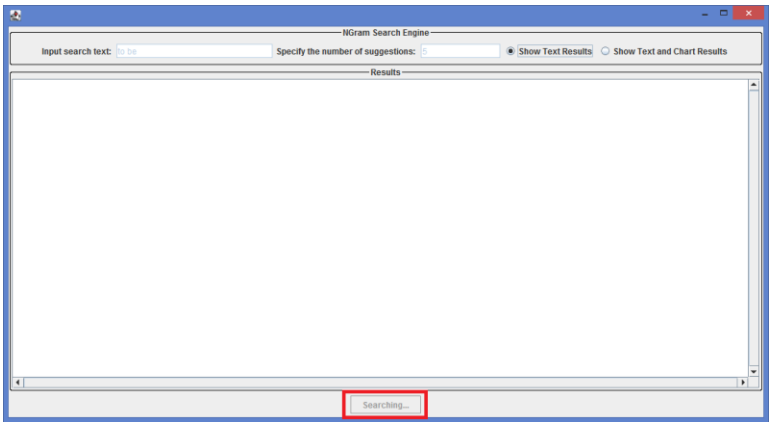
4. The NGram node's search results are displayed correctly as shown in the **Screenshot 3**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 3** and **Screenshot 4**.

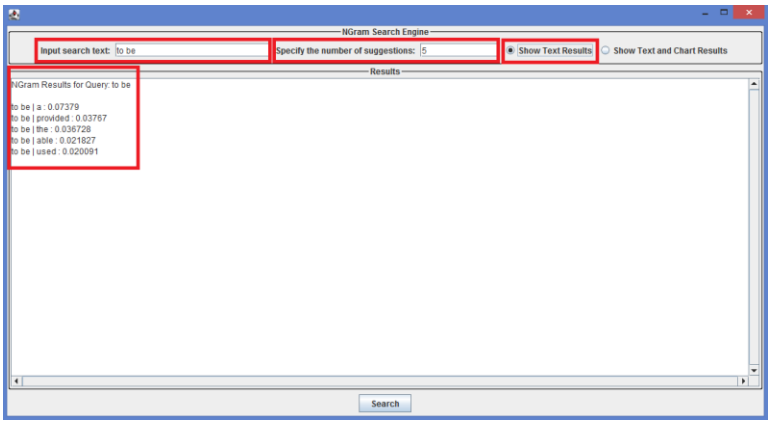
6. The system shows the results in the form of a graphical display with a bar chart and the text display is available for selection as shown in the **Screenshot 4**.



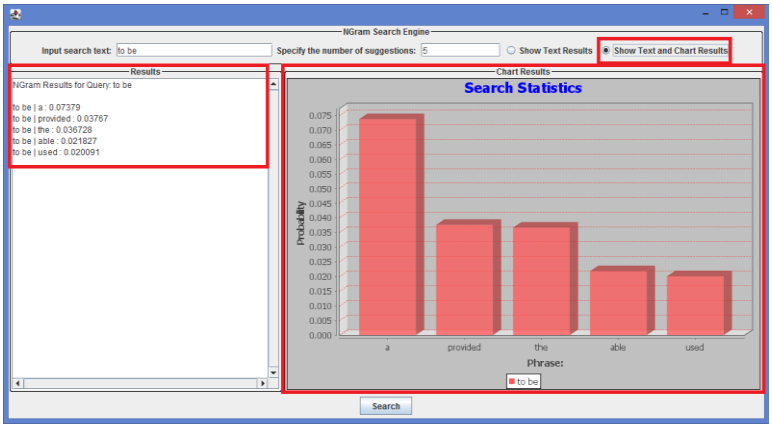
Screenshot 1



Screenshot 2



Screenshot 3



Screenshot 4

Test Case 2:

Input Search Text: I'm looking for

Number of Suggestions specified by the user: 4

1. The user inputs a search string "**I'm looking for**" and specifies the number of suggestions as **4**.

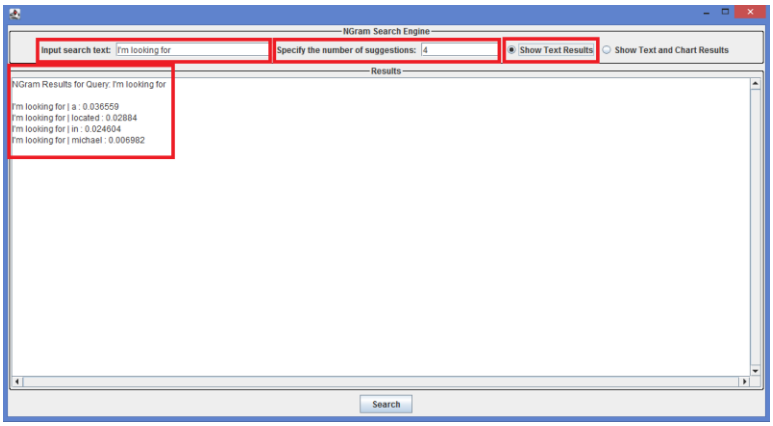
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

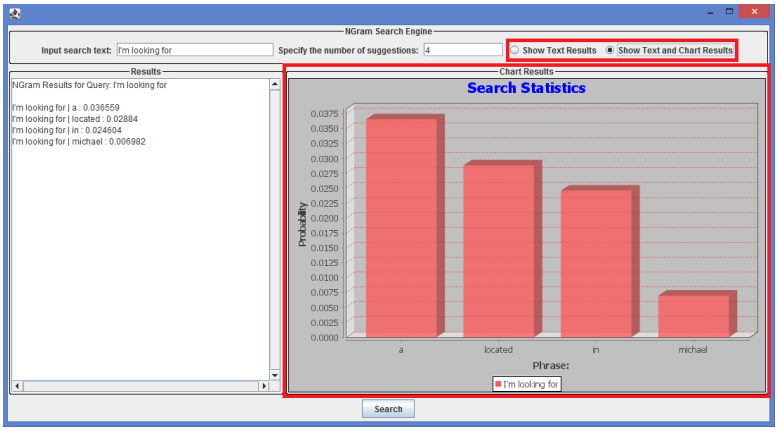
4. The NGram node's search results are displayed correctly as shown in the **Screenshot 1**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 2**.

6. The system shows the results in the form of a graphical display with a bar chart and the text display is available for selection as shown in the **Screenshot 2**.



Screenshot 1



Screenshot 2

Test Case 3:

Input Search Text: 12345

Number of Suggestions specified by the user: 3

1. The user inputs a search string "**12345**" and specifies the number of suggestions as **3**.

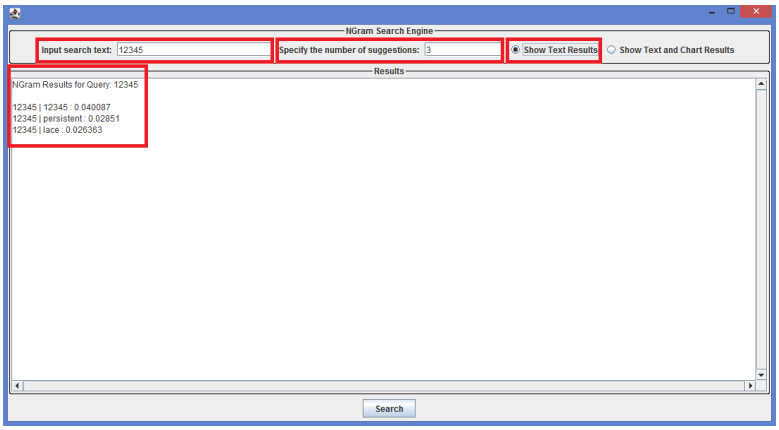
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

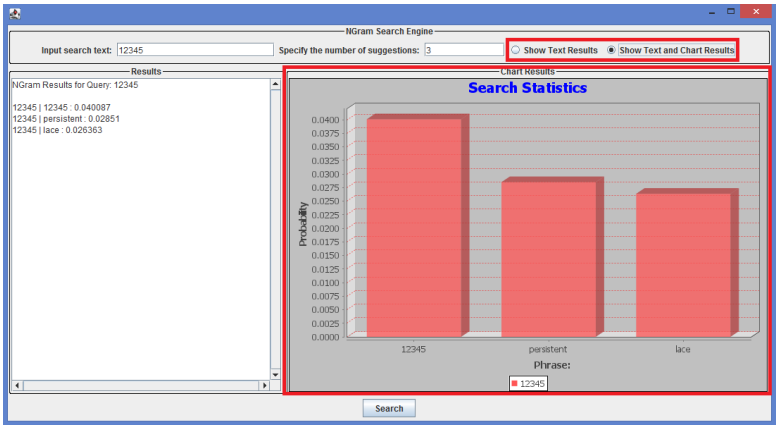
4. The NGram node's search results are displayed correctly as shown in the **Screenshot 1**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 2**.

6. The system shows the results in the form of a graphical display with a bar chart and the text display is available for selection as shown in the **Screenshot 2**.



Screenshot 1



Screenshot 2

Test Case 4:

Input Search Text: test, test1, test6

Number of Suggestions specified by the user: 2

1. The user inputs a search string "**test, test1, test6**" and specifies the number of suggestions as **2**.

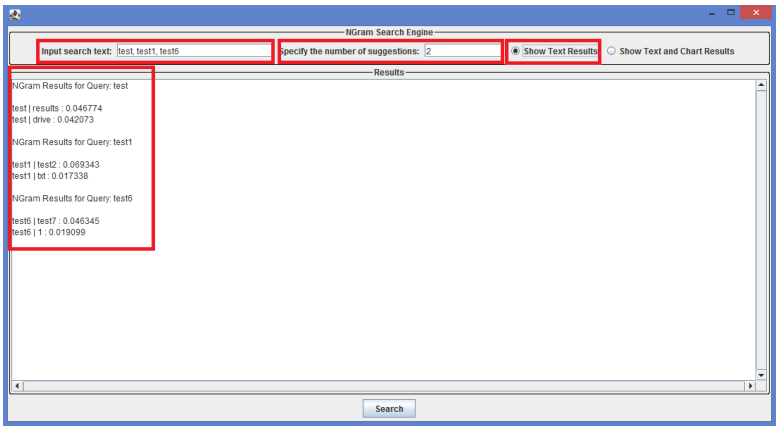
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

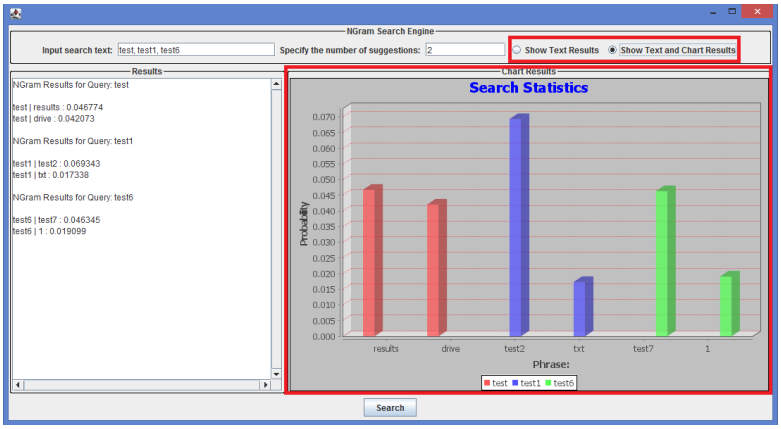
4. The NGram node's search results are displayed correctly as shown in the **Screenshot 1**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 2**.

6. The system shows the results in the form of a graphical display with a bar chart and the text display is available for selection as shown in the **Screenshot 2**.



Screenshot 1



Screenshot 2

Test Case 5:

Input Search Text: RYGFBUTOIPK

Number of Suggestions specified by the user: 5

1. The user inputs a search string "**RYGFBUTOIPK**" and specifies the number of suggestions as **5**.

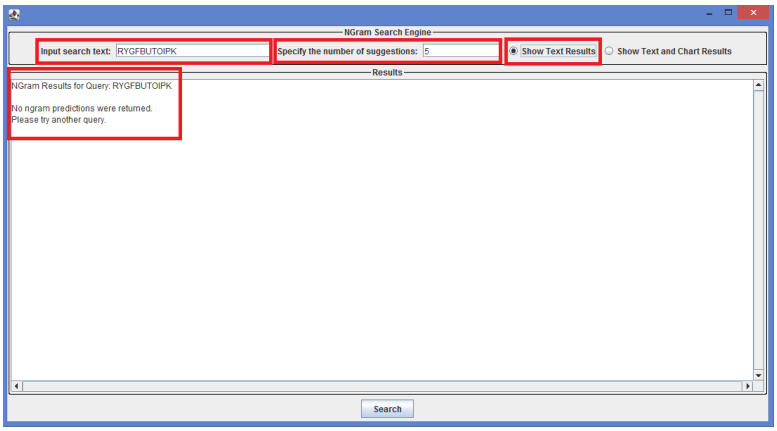
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

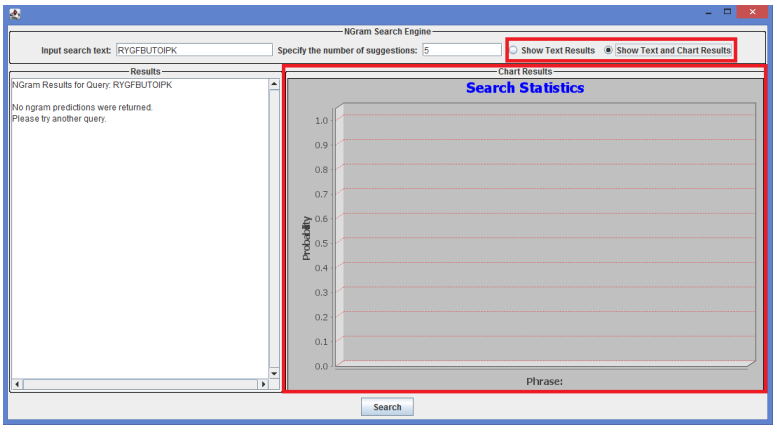
4. The NGram node's search results are not displayed and an error message "No ngram predictions were returned. Please try another query" is displayed on the node i.e., the store is empty as shown in the **Screenshot 1**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 2**.

6. The system does not show the bar graph results but the text display is available for selection as shown in the **Screenshot 2**.



Screenshot 1



Screenshot 2

<u>Test Case 6</u>: Input Search Text: abcde, fdagfhghgjkjhgf , 123456, I'am doing this

Number of Suggestions specified by the user: 5

1. The user inputs a search string "**abcde, fdagfhghgjkjhgf , 123456, I'am doing this**" and specifies the number of suggestions as **5**.

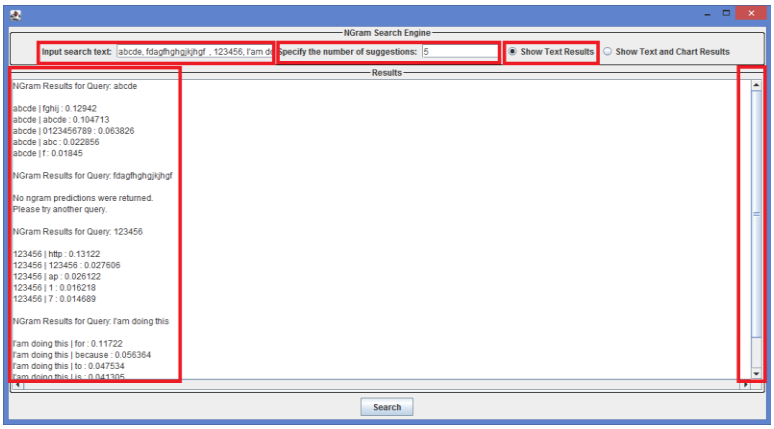
2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

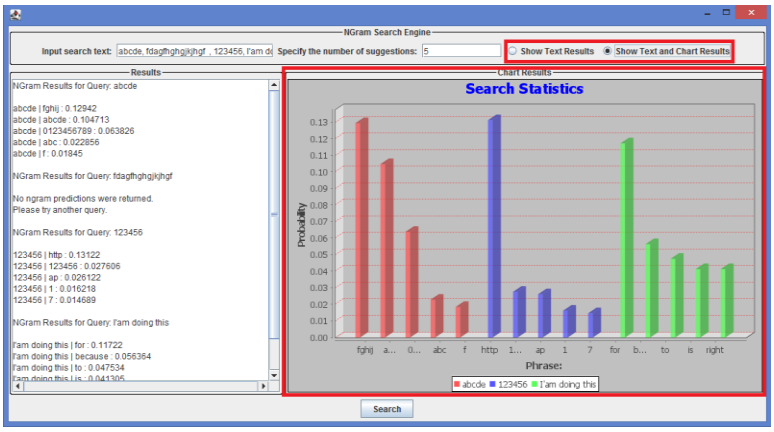
4. The NGram node's search results are displayed correctly for all other search inputs except for "**fdagfhghgjkjhgf**", the suggestions are not displayed and an error message "No ngram predictions were returned. Please try another query" is displayed on the node for this case and the scrollbar is visible as shown in the **Screenshot 1**.

5. The radio buttons "Show Text Results" and "Show Text and Chart Results" are selected as shown in the **Screenshot 2**.

6. The system does not show the bar graph results but the text display is available for selection as shown in the **Screenshot 2**.



Screenshot 1

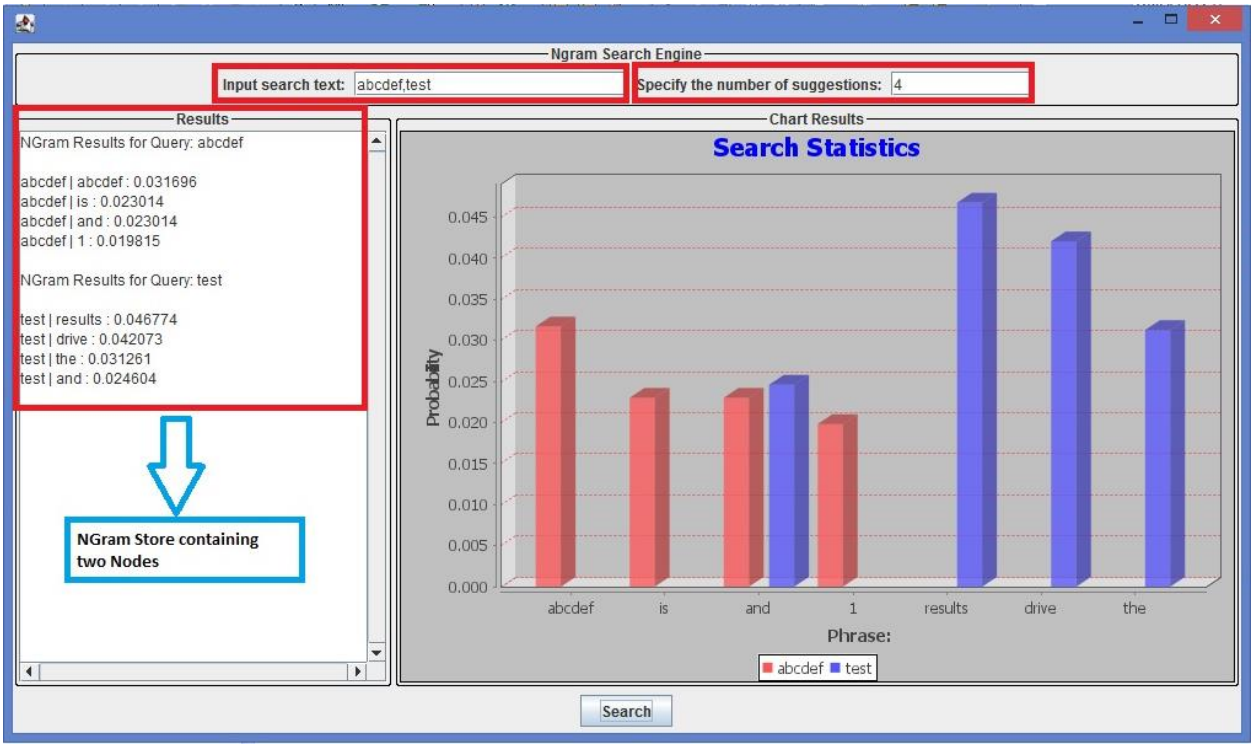


Screenshot 2

Based on the test-driven development, the test cases shown below are the old ones. By executing the below test cases we checked and corrected certain important bugs on the GUI. For example, we added the radio buttons “Show Text Results” and “Show Text and Chart Results” on the new GUI.

<u>Test Case 1</u>: Input Search Text: abcdef,test

Number of Suggestions specified by the user: 4

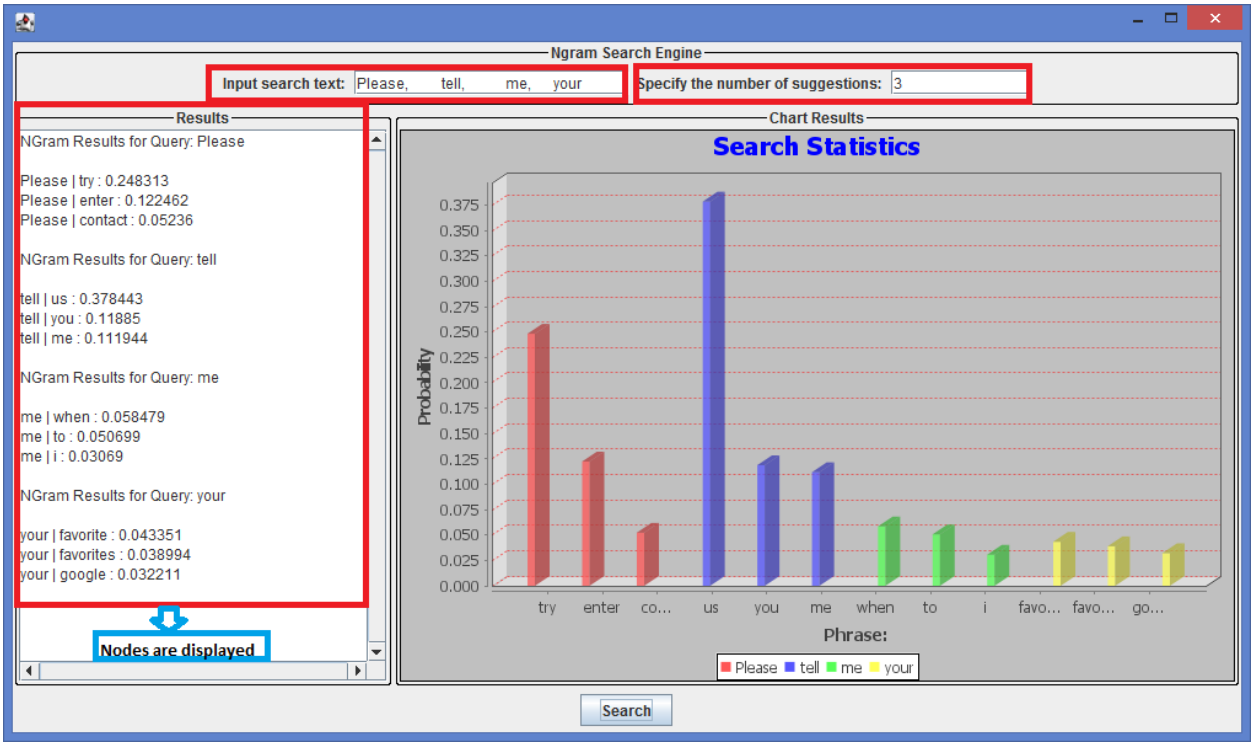


Screenshot 6

When a user enters an input search string "**abcdef,test**", specifies the number of suggestions as some random value '**4**' and then clicks on the "**Search**" button, the search results of the NGram store containing two nodes are displayed as indicated in the Left Hand Side of **Screenshot 6**. This is because, the search results of "**abcdef**" are displayed on node 1 and the search result for '**test**' is displayed on node 2. Also, the probability graph is shown on the NGram GUI as indicated in the **Screenshot 6**.

<u>Test Case 2</u>: Input Search Text: Please, tell, me, your

Number of Suggestions specified by the user: 3



Screenshot 8

When a user enters an input search string "**Please, tell, me, your**", specifies the number of suggestions as some random value '**3**' and then clicks on the "**Search**" button, the corresponding three search results of the NGram node are displayed correctly inside the store as indicated in the Left Hand Side of **Screenshot 8** and the probability graph is also shown on the NGram GUI.

Negative GUI Test Scenarios:

<u>Test Case 1 (new)</u>: Input Search Text: pqrst, yft75678 , 123456, I'am doing this

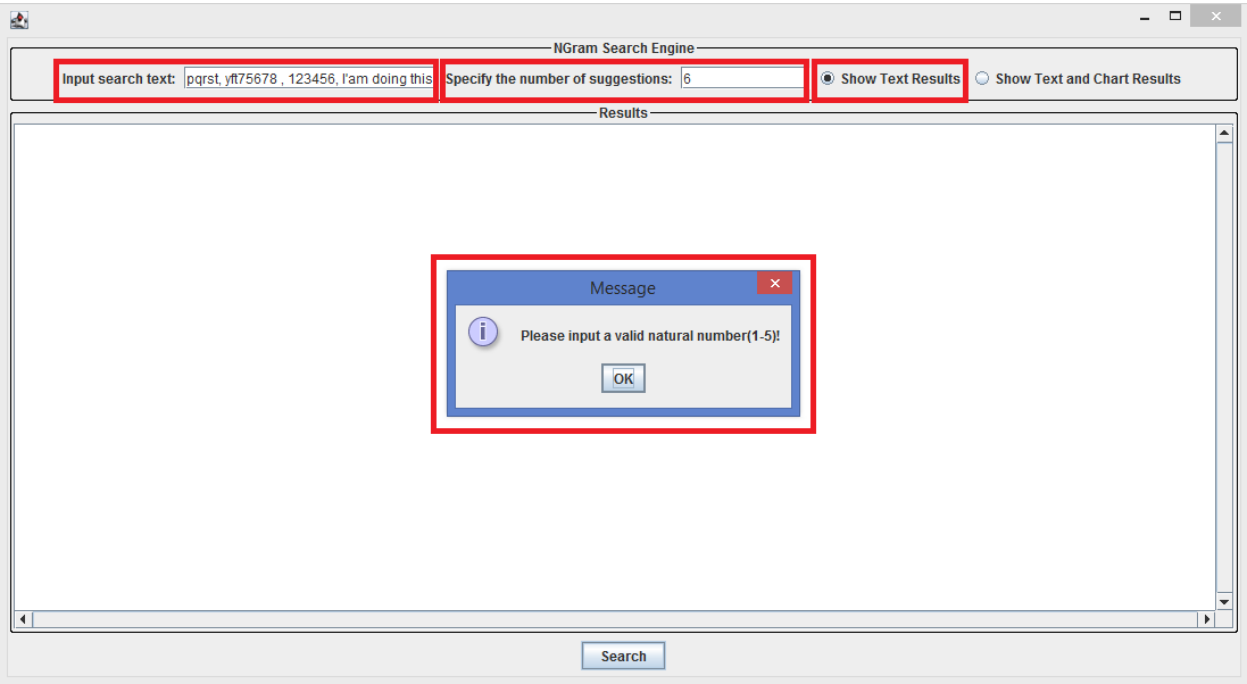
Number of Suggestions specified by the user: 6

1. The user inputs a search string "**abcde, fdagfhghgjkjhgf , 123456, I'am doing this**" and specifies the number of suggestions as **6**.

2. The system shows the current query and parameter values; No update has been performed to the text display; graphical display remains unavailable.

3. The user then clicks on the "**Search**" button on the GUI.

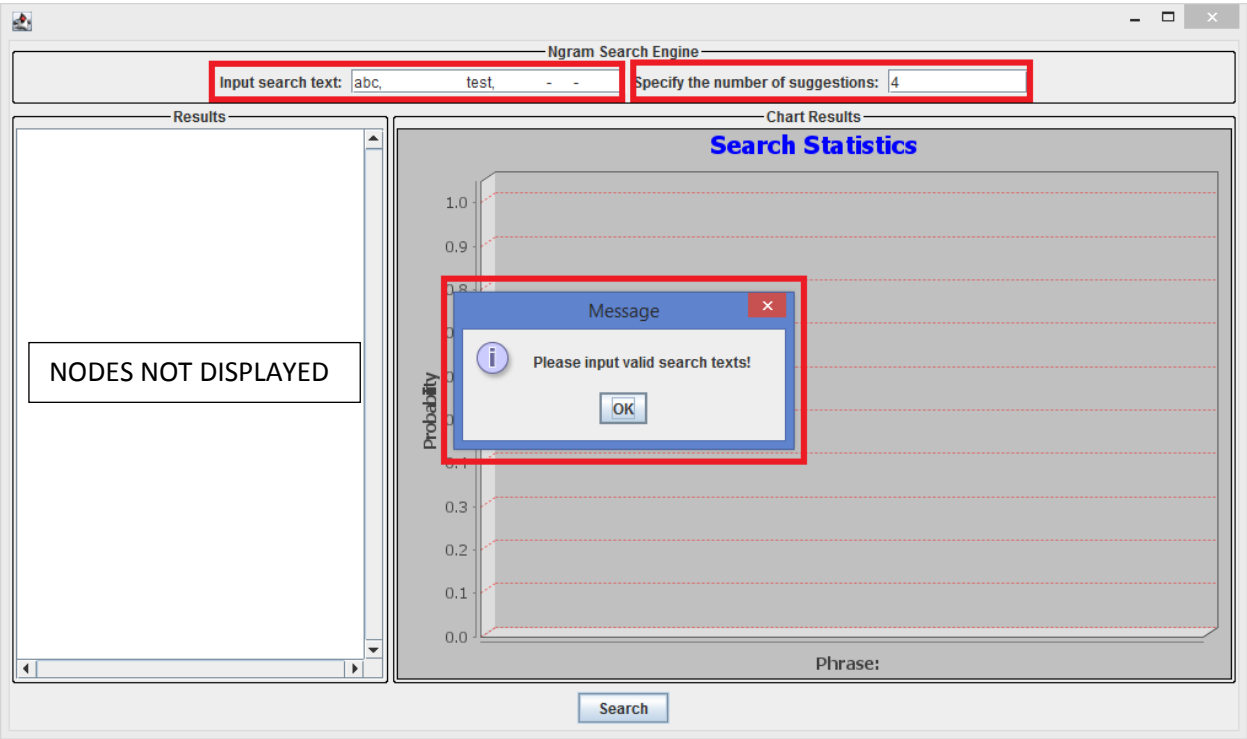
4. The NGram node's search results are not displayed since the number of suggestions entered by the user is **6**. An error dialog box "Please input a valid natural number(1-5)!" is displayed on the GUI for this case as shown in the **Screenshot 1**.



Screenshot 1

<u>Test Case 1</u>: Input Search Text: abc, test, - -

Number of Suggestions specified by the user: 4

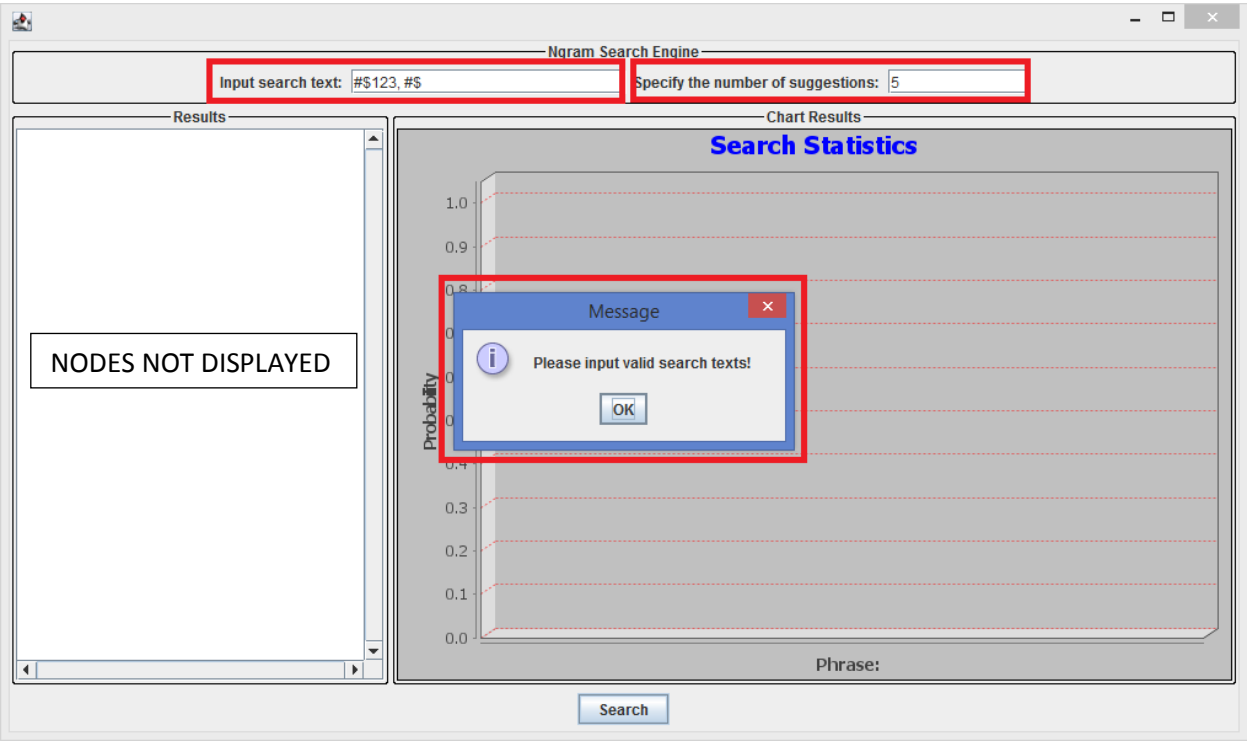


Screenshot 1

When a user enters an input search string "**abc, test, - -** ", specifies the number of suggestions as some random value '**4**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 1**.

<u>Test Case 2</u>: Input Search Text: #$123, #%

Number of Suggestions specified by the user: 4

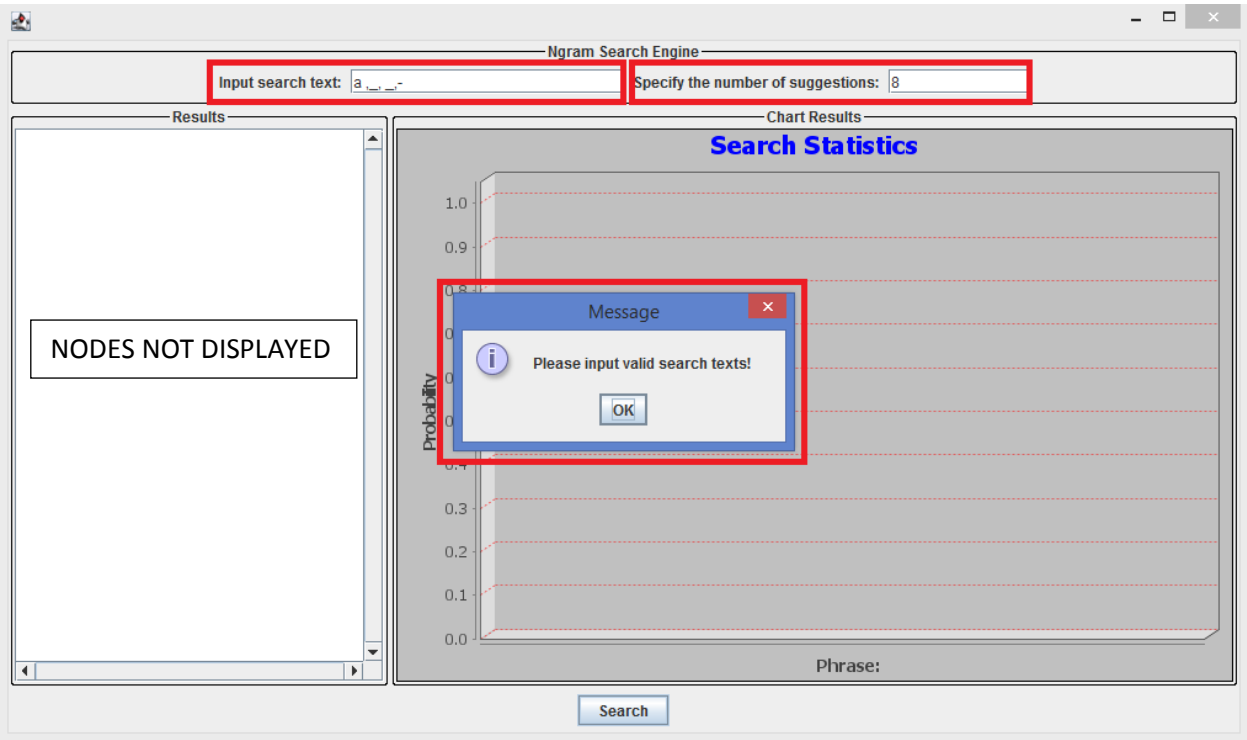


Screenshot 2

When a user enters an input search string **"#$123, #%** ", specifies the number of suggestions as some random value '**5**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 2**.

<u>Test Case 3</u>: Input Search Text: a ,_, _,-

Number of Suggestions specified by the user: 8

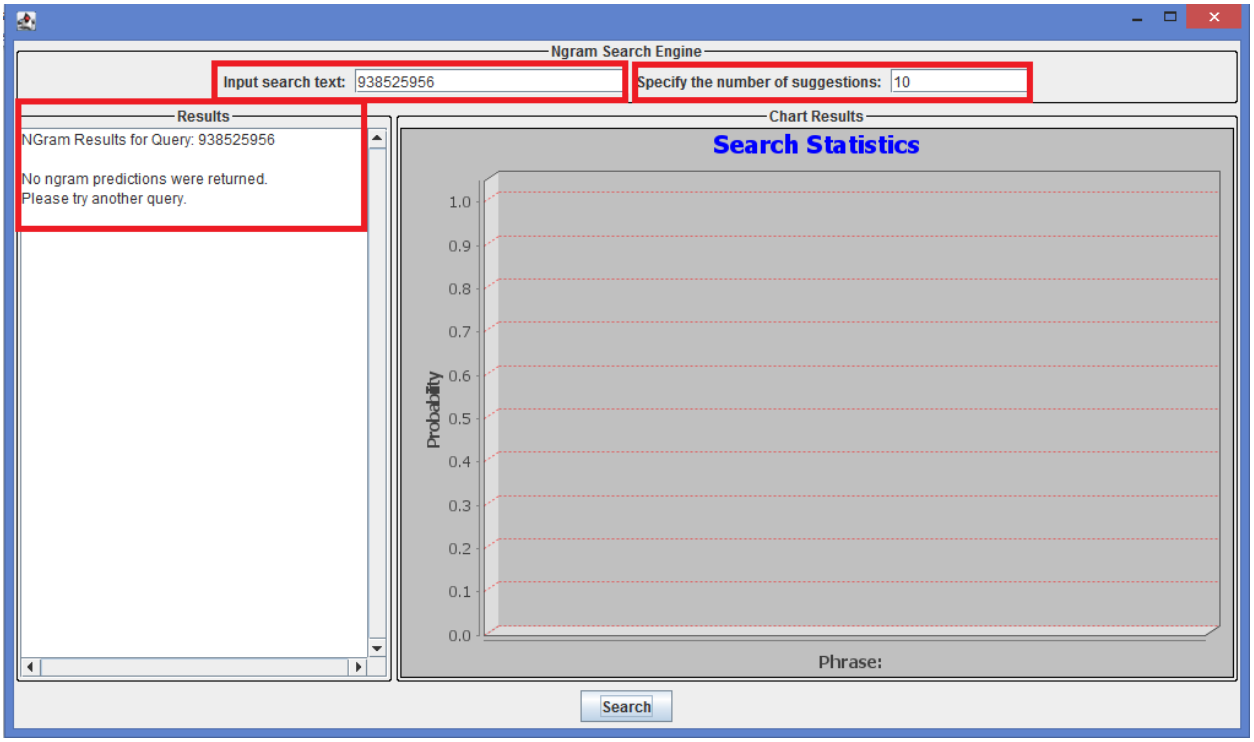


Screenshot 3

When a user enters an input search string "**a ,_, _,-** " specifies the number of suggestions as some random value '**8**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 3**.

<u>Test Case 4</u>: Input Search Text: 938525956

Number of Suggestions specified by the user: 10

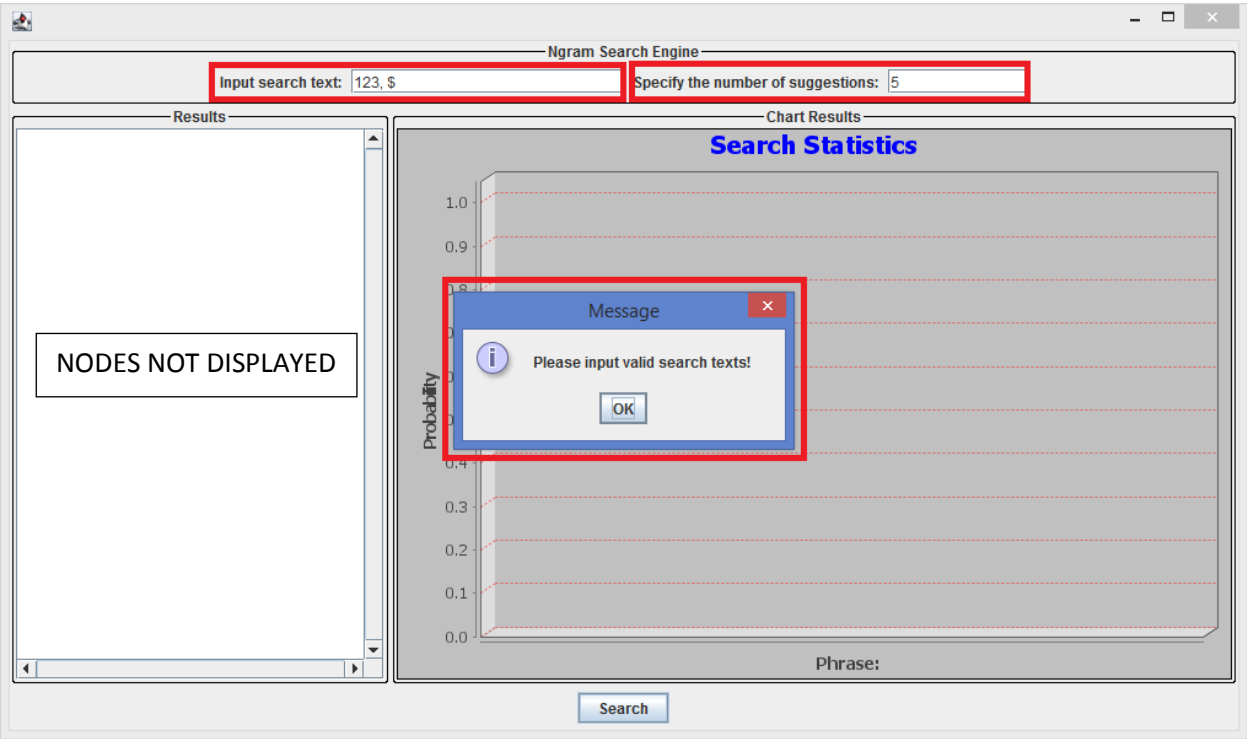


Screenshot 4

When a user enters a random number input "**938525956**", specifies the number of suggestions as some random value '**10**' and then clicks on the "**Search**" button, there are no search results displayed and an error message "**No ngram predictions were returned. Please try another query**" is displayed on the node i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 4**.

<u>Test Case 5</u>: Input Search Text: 123, $

Number of Suggestions specified by the user: 5

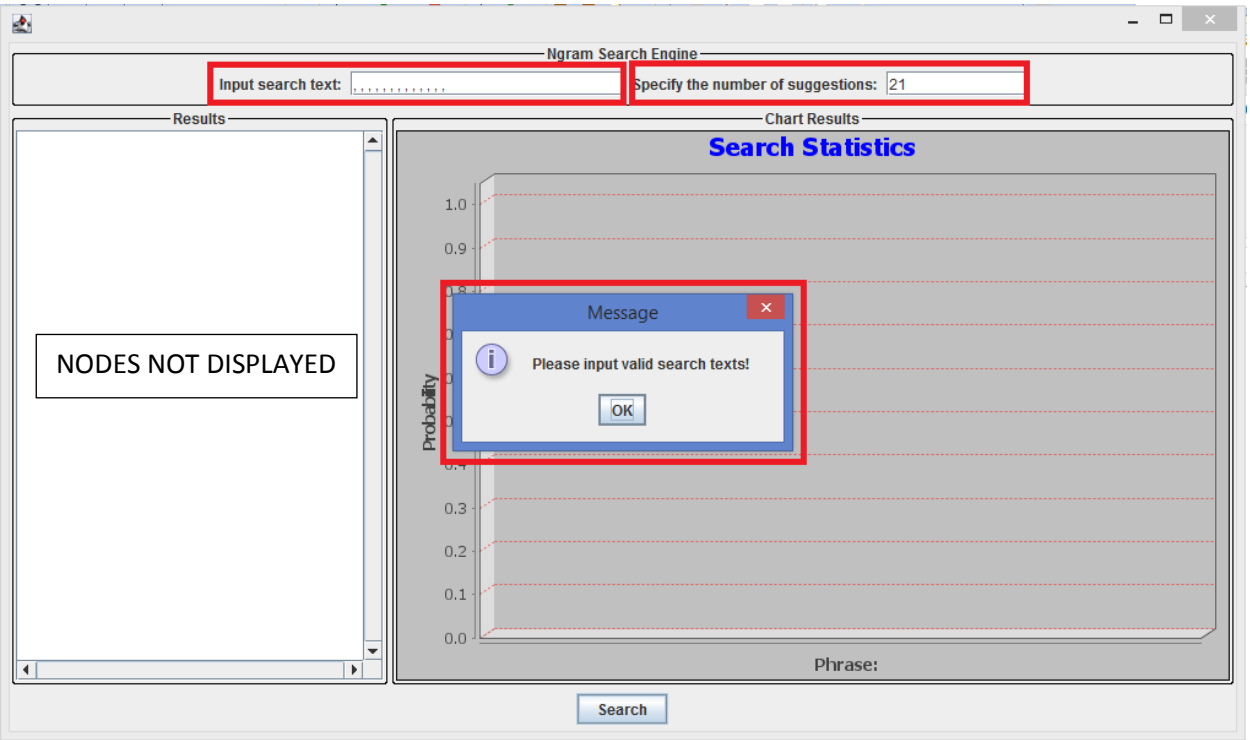


Screenshot 5

When a user enters a random number input "**123, $**", specifies the number of suggestions as some random value '**5**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 5**.

<u>Test Case 6</u>: Input Search Text: , , , , , , , , , , , , ,

Number of Suggestions specified by the user: 21

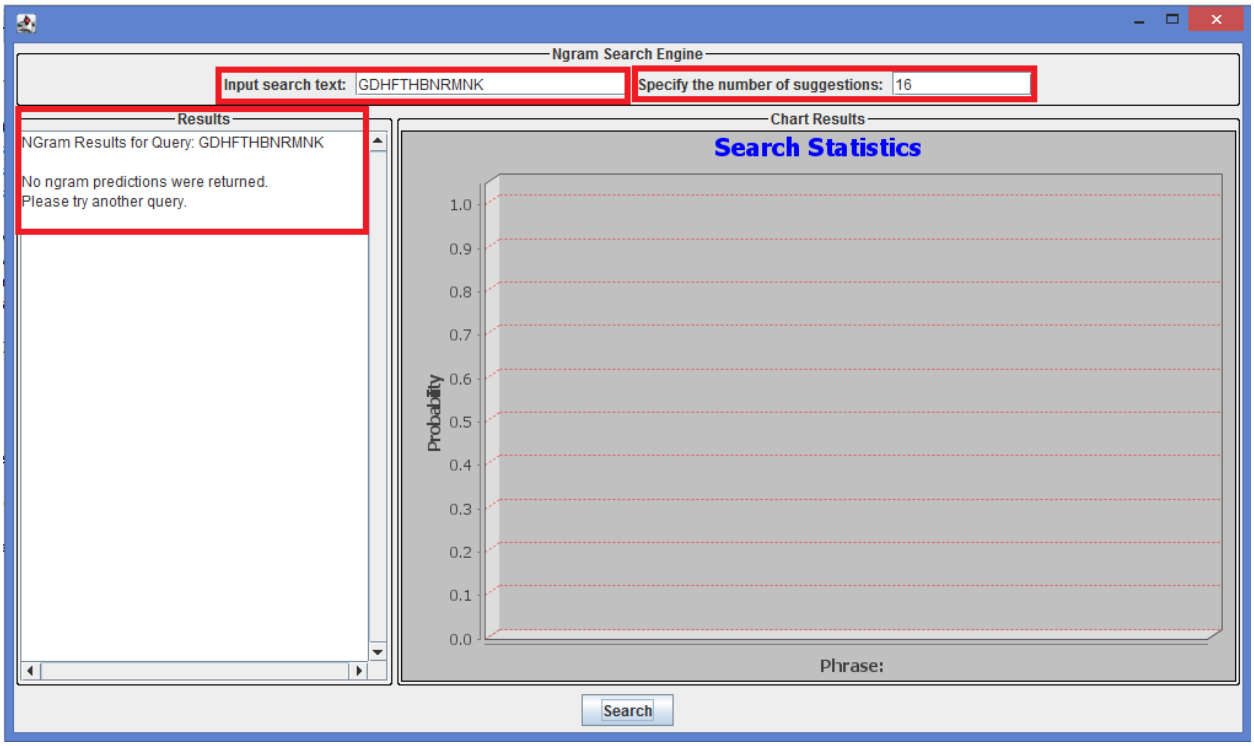


Screenshot 6

When a user enters a random number input "**, , , , , , , , , , , , ,**" , specifies the number of suggestions as some random value '**21**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 6**.

<u>Test Case 7</u>: Input Search Text: GDHFTHBNRMNK

Number of Suggestions specified by the user: 16

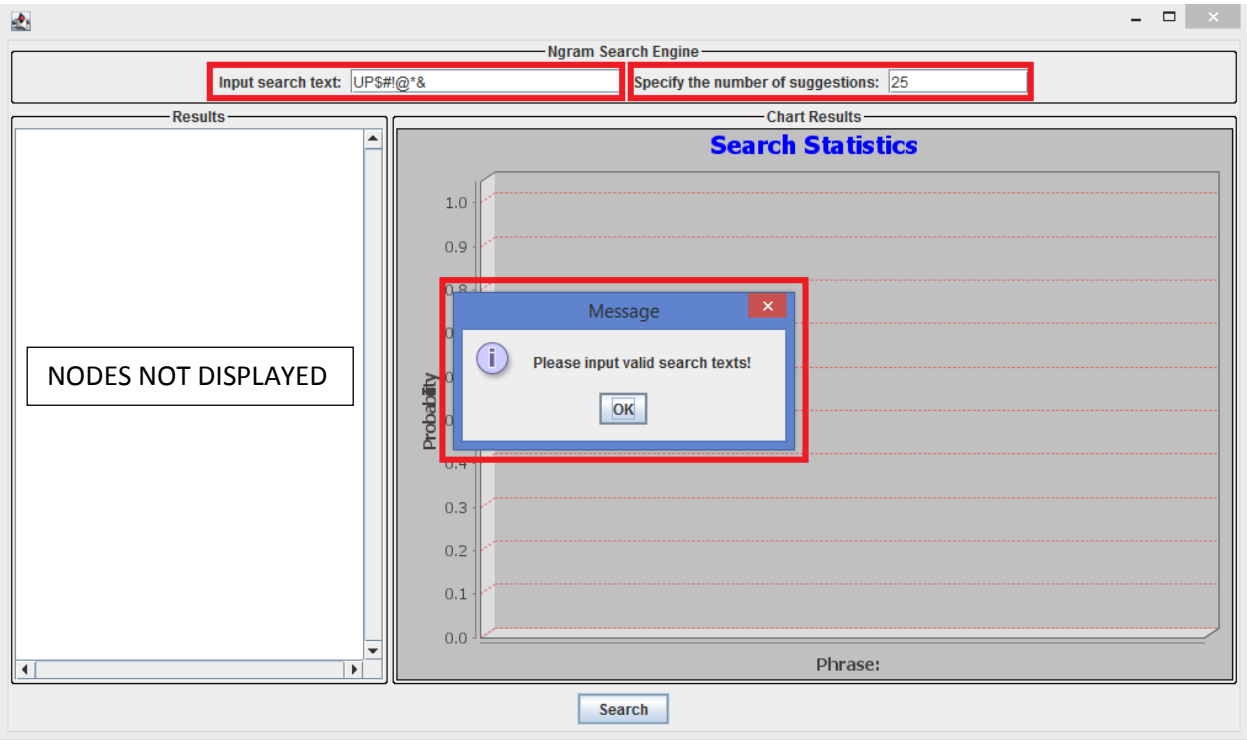


Screenshot 7

When a user enters a random number input "**GDHFTHBNRMNK**", specifies the number of suggestions as some random value '**16**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 7**.

<u>Test Case 8</u>: Input Search Text: UP$#!@*&

Number of Suggestions specified by the user: 25

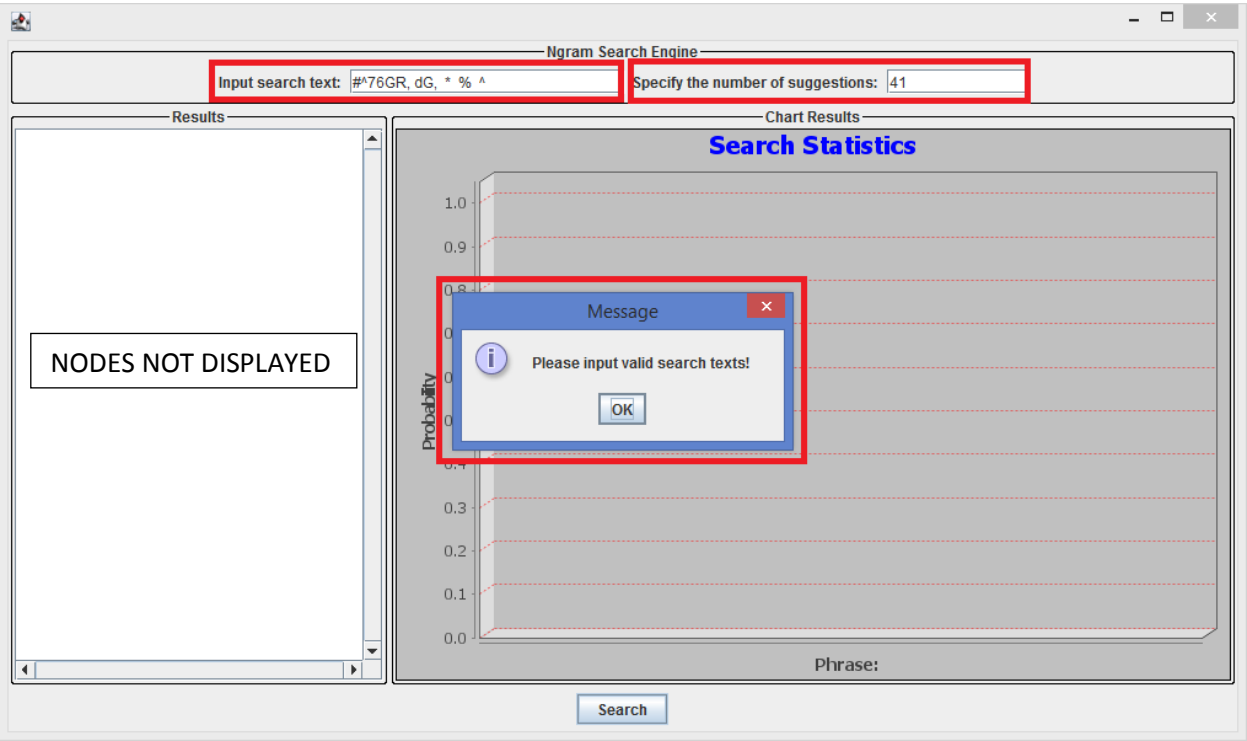


Screenshot 8

When a user enters a random number input "**UP$#!@*&**", specifies the number of suggestions as some random value '**25**' and then clicks on the "**Search**" button, an error message "**No ngram predictions were returned. Please try another query.**" is displayed in the place of the node and the corresponding search results of NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 8**.

<u>Test Case 9</u>: Input Search Text: #^76GR, dG, * % ^

Number of Suggestions specified by the user: 41

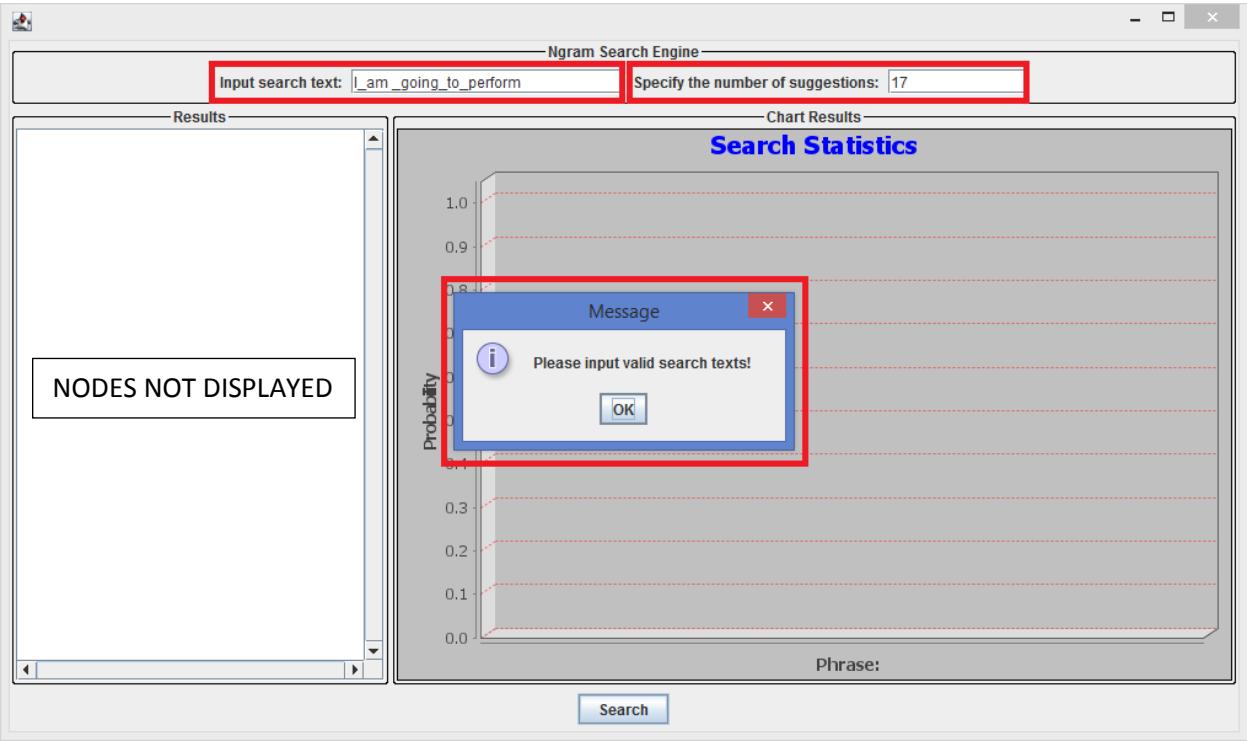


Screenshot 9

When a user enters an input search string "**#^76GR, dG, * % ^** ", specifies the number of suggestions as some random value '**41**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 9**.

<u>Test Case 10</u>: Input Search Text: I_am _going_to_perform

Number of Suggestions specified by the user: 17

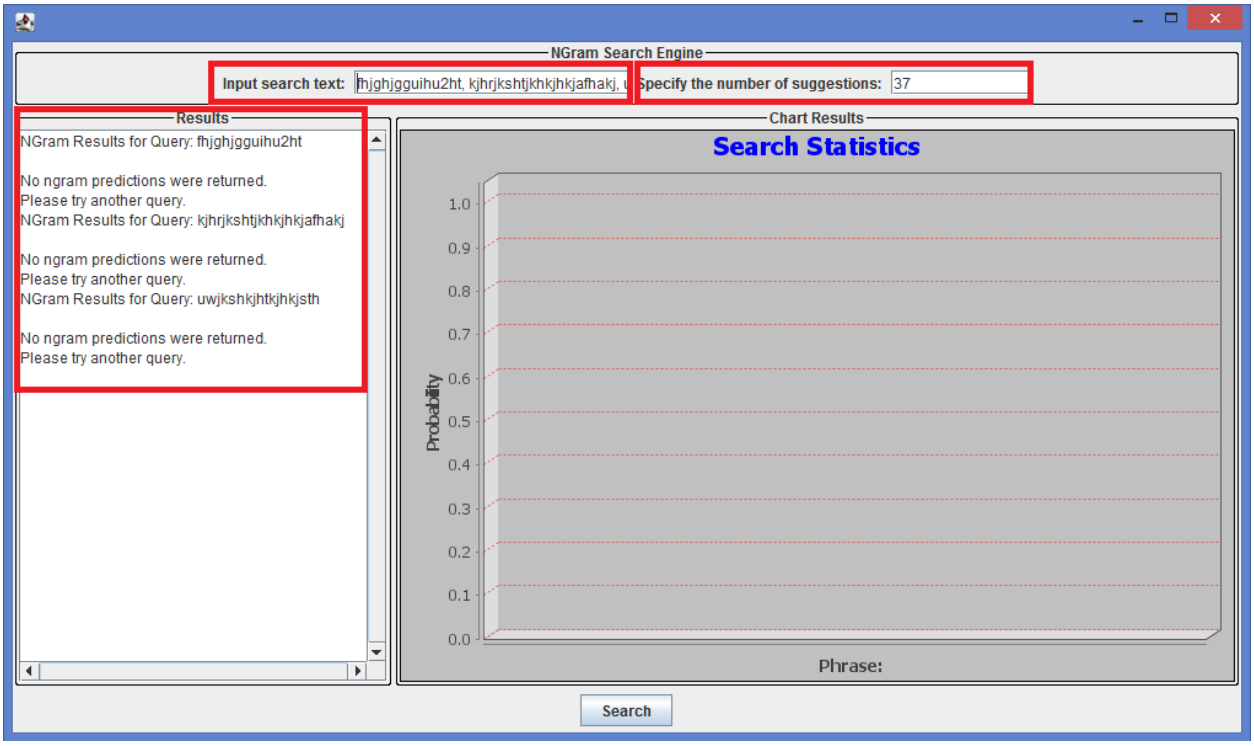


Screenshot 10

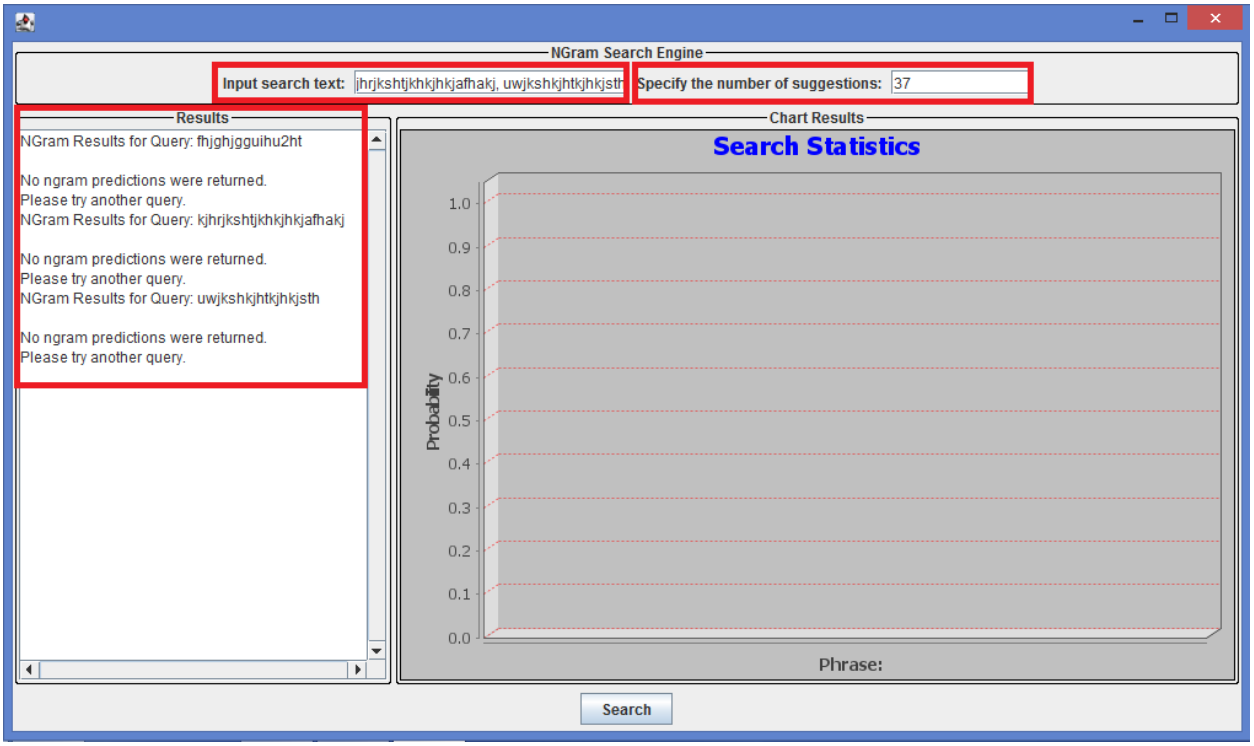
When a user inputs a search string "**I_am _going_to_perform**", specifies the number of suggestions as some random value '**17**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 10**.

<u>Test Case 11</u>: Input Search Text: fhjghjgguihu2ht, kjhrjkshtjkhkjhkjafhakj, uwjkshkjhtkjhkjsth

Number of Suggestions specified by the user: 37



Screenshot 11

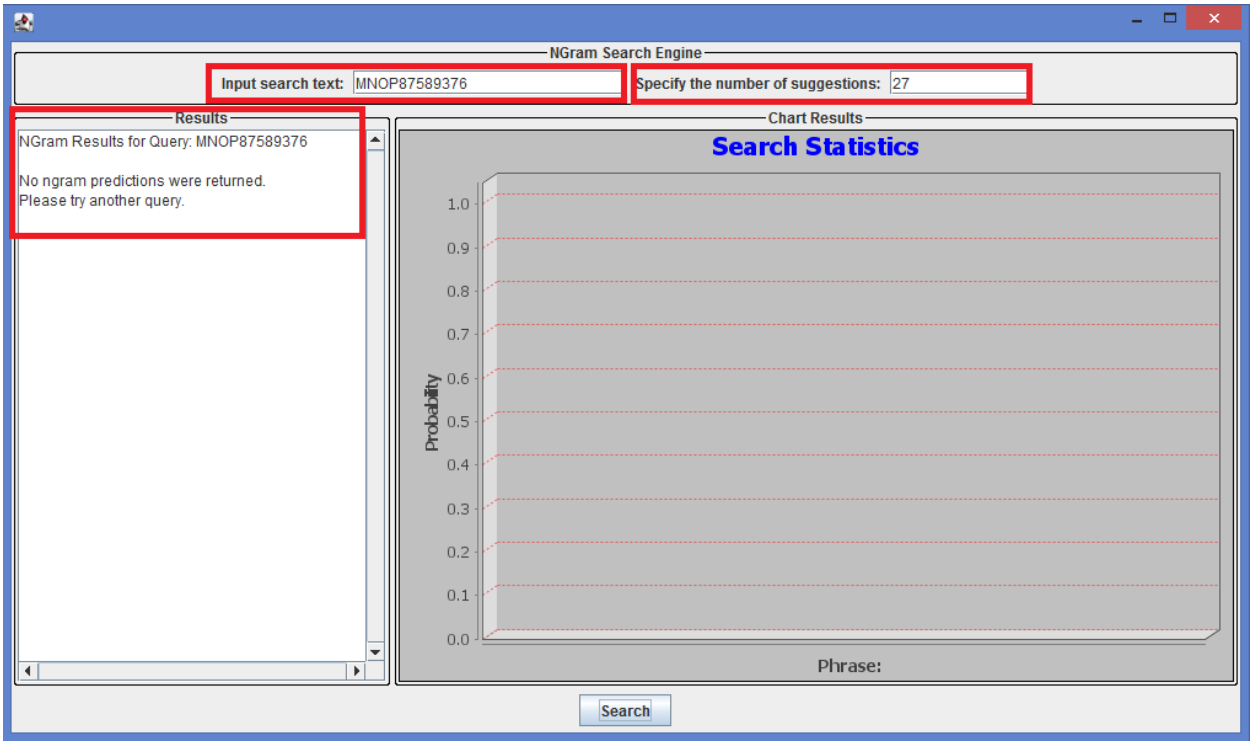


Screenshot 12

When a user enters a random number input "**fhjghjgguihu2ht, kjhrjkshtjkhkjhkjafhakj, uwjkshkjhtkjhkjsth**", specifies the number of suggestions as some random value '**37**' and then clicks on the "**Search**" button, there are no search results displayed and an error message "**No ngram predictions were returned. Please try another query**" is displayed on the node i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 11** and **Screenshot 12**.

<u>Test Case 12</u>: Input Search Text: MNOP87589376

Number of Suggestions specified by the user: 26

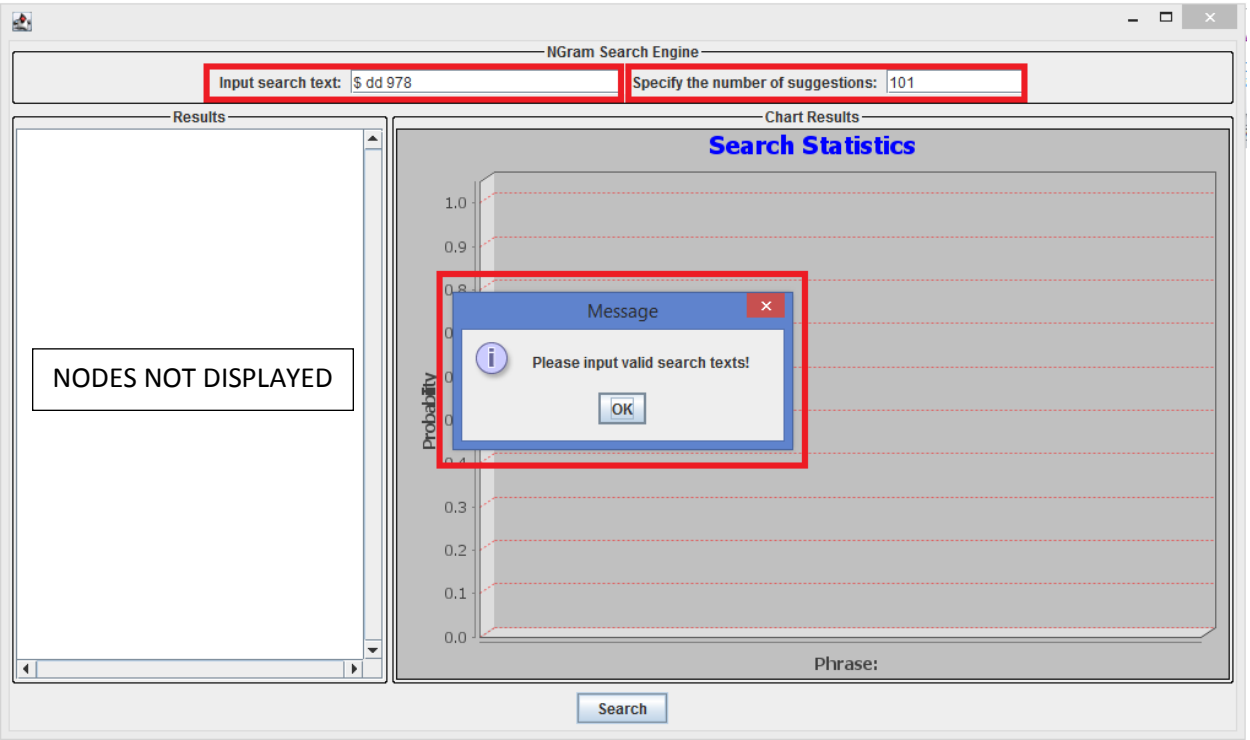


Screenshot 13

When a user inputs a search string "**MNOP87589376**", specifies the number of suggestions as some random value '**27**' and then clicks on the "**Search**" button, there are no search results displayed and an error message "**No ngram predictions were returned. Please try another query**" is displayed on the node i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 13**.

<u>Test Case 13</u>: Input Search Text: $ dd 978

Number of Suggestions specified by the user: 101

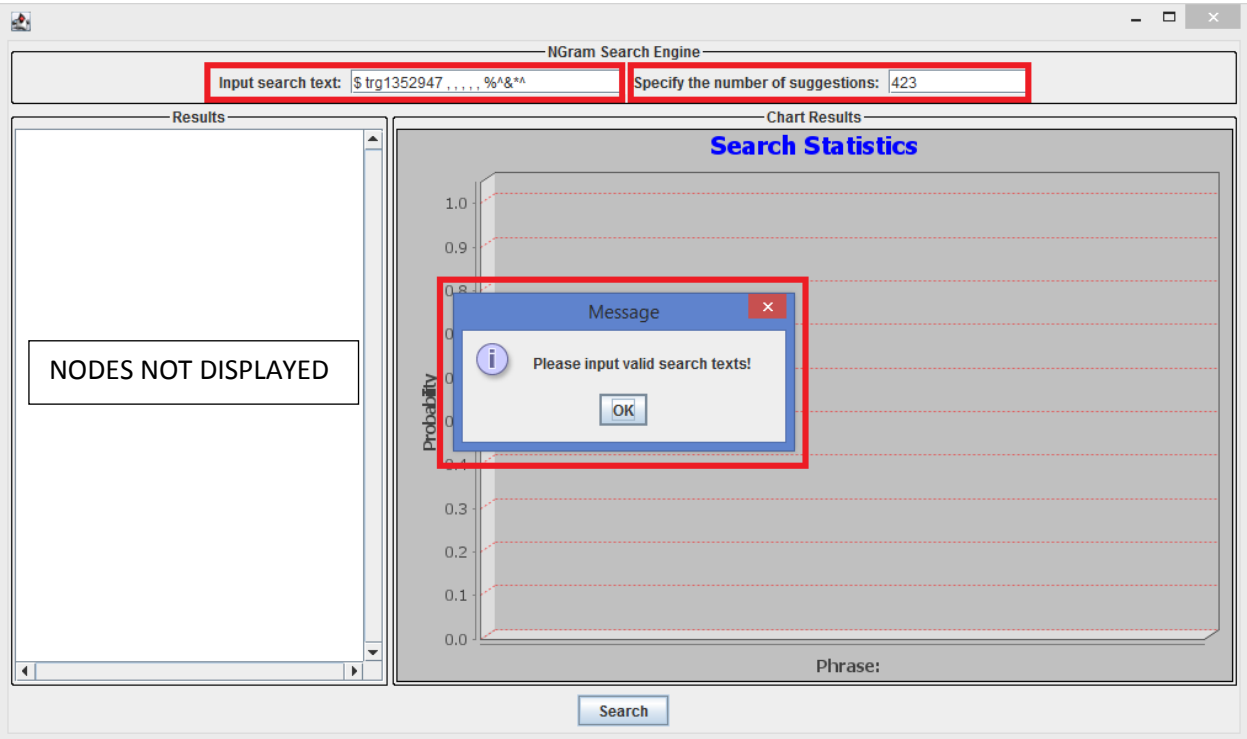


Screenshot 14

When a user inputs a search string "**$ dd 978**", specifies the number of suggestions as some random value '**101**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 14**.

<u>Test Case 14</u>: Input Search Text: $ trg1352947 , , , , , %^&*^

Number of Suggestions specified by the user: 423

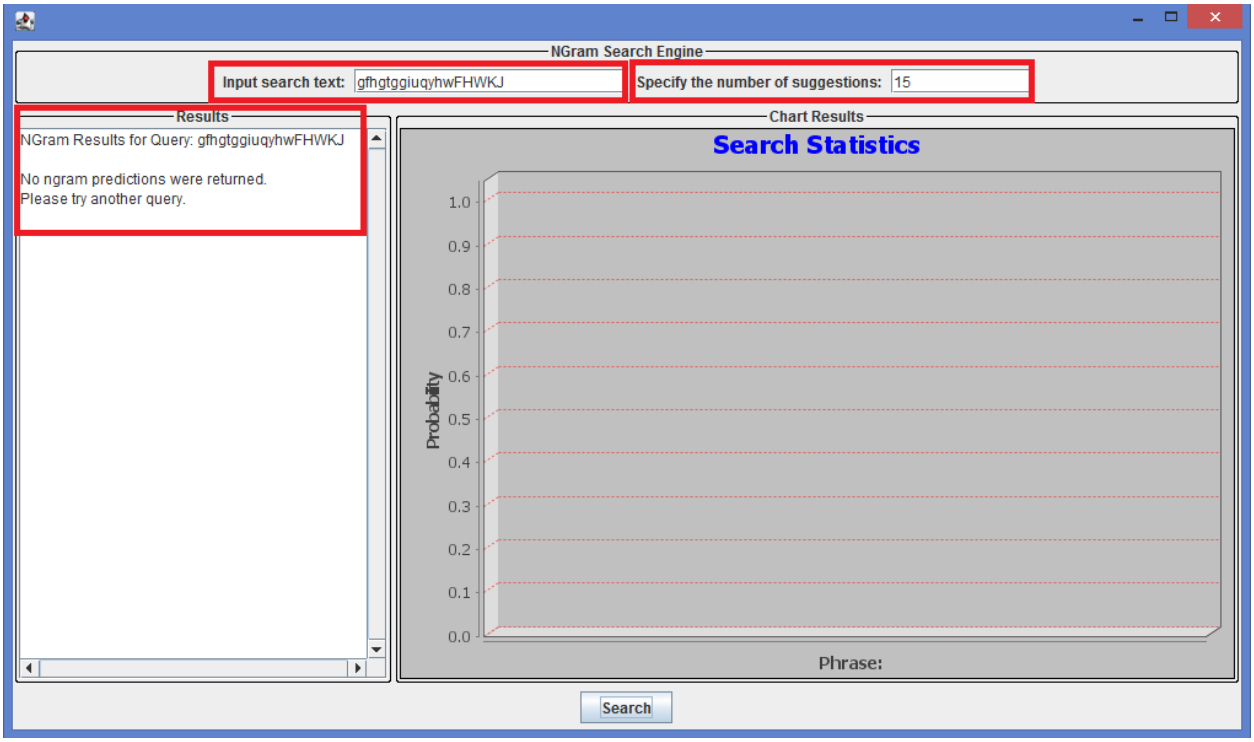


Screenshot 15

When a user inputs a search string "**$ trg1352947 , , , , , %^&*^**", specifies the number of suggestions as some random value '**423**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 15**.

<u>Test Case 15</u>: Input Search Text: gfhgtggiuqyhwFHWKJ

Number of Suggestions specified by the user: 15

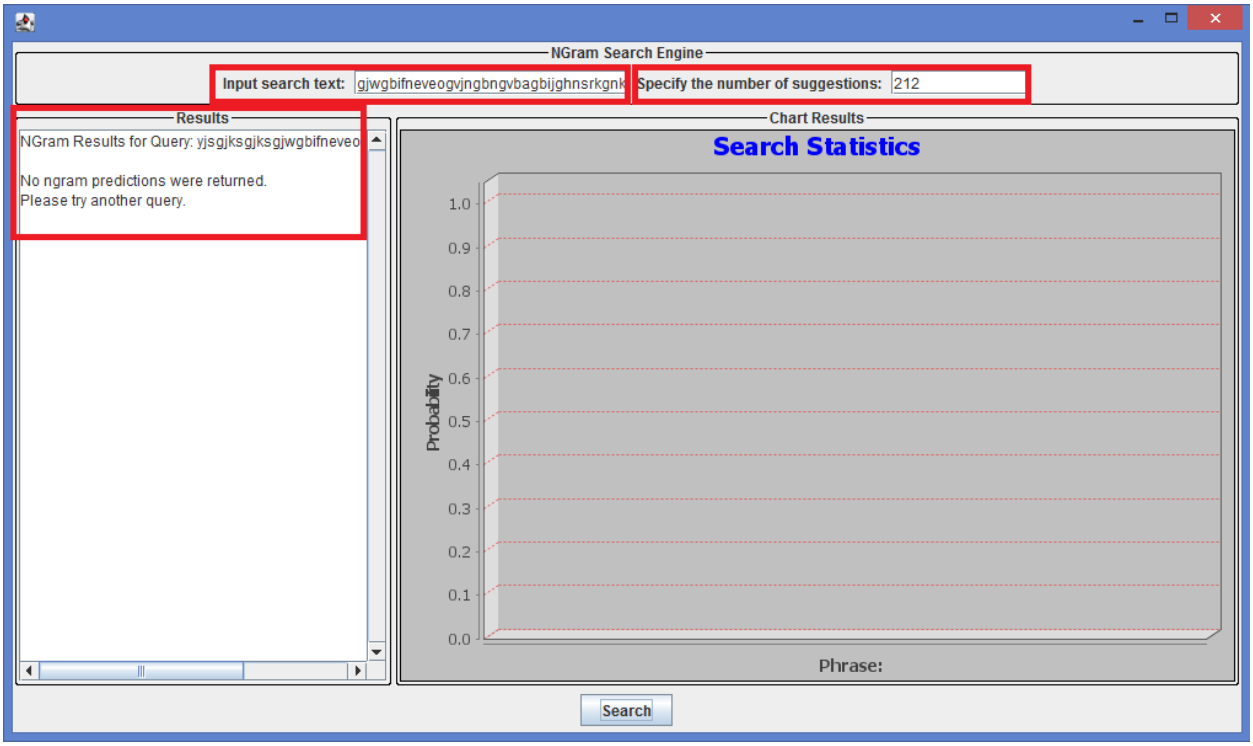


Screenshot 16

When a user inputs a search string "**gfhgtggiuqyhwFHWKJ**", specifies the number of suggestions as some random value '**15**' and then clicks on the "**Search**" button, there are no search results displayed and an error message "**No ngram predictions were returned. Please try another query**" is displayed on the node i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 16**.

<u>Test Case 16</u>: Input Search Text: yjsgjksgjksgjwgbifneveogvjngbngvbagbijghnsrkgnk

Number of Suggestions specified by the user: 212

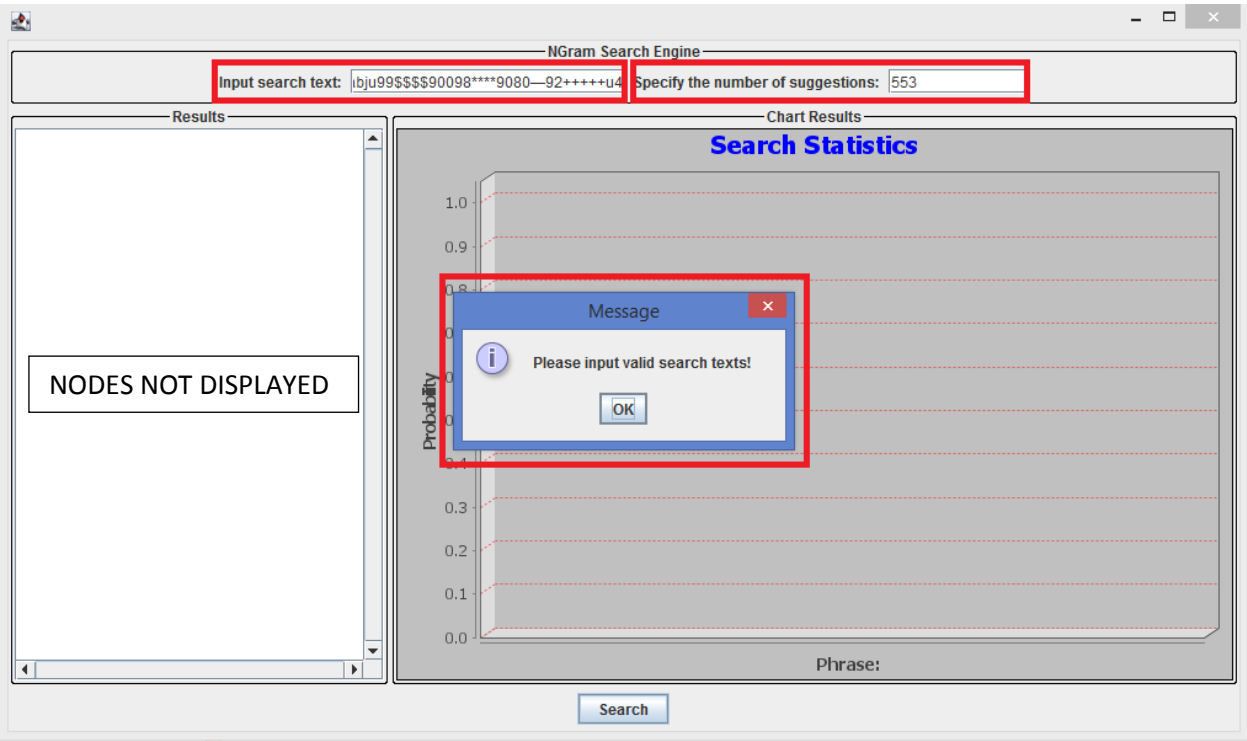


Screenshot 17

When a user inputs a search string "**yjsgjksgjksgjwgbifneveogvjngbngvbagbijghnsrkgnk**" specifies the number of suggestions as some random value '**212**' and then clicks on the "**Search**" button, there are no search results displayed and an error message "**No ngram predictions were returned. Please try another query**" is displayed on the node i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 17**.

<u>Test Case 17</u>: Input Search Text: fhjbj####wbjwabju99$$$$90098****9080−92+++++u4

Number of Suggestions specified by the user: 553

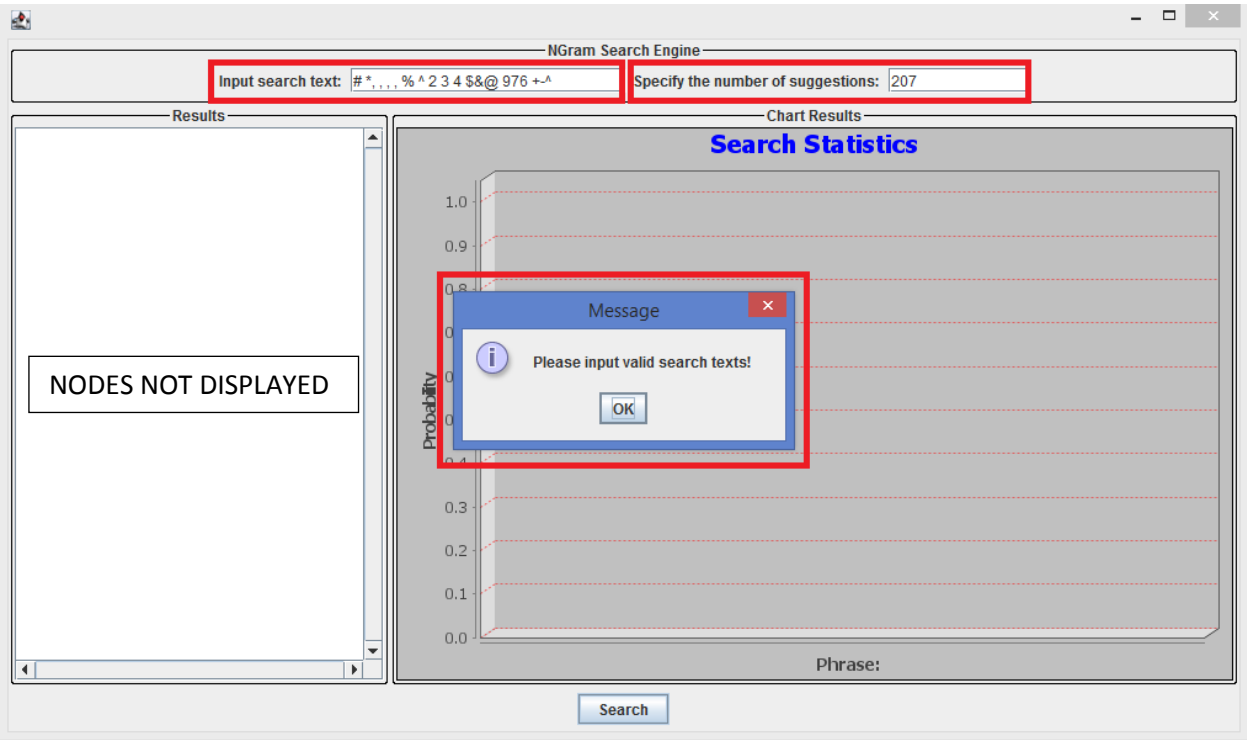


Screenshot 18

When a user inputs a search string "**fhjbj####wbjwabju99$$$$90098****9080−92+++++u4**" specifies the number of suggestions as some random value '**553**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 18**.

<u>Test Case 18</u>: Input Search Text: # *, , , , % ^ 2 3 4 $&@ 976 +-^

Number of Suggestions specified by the user: 207

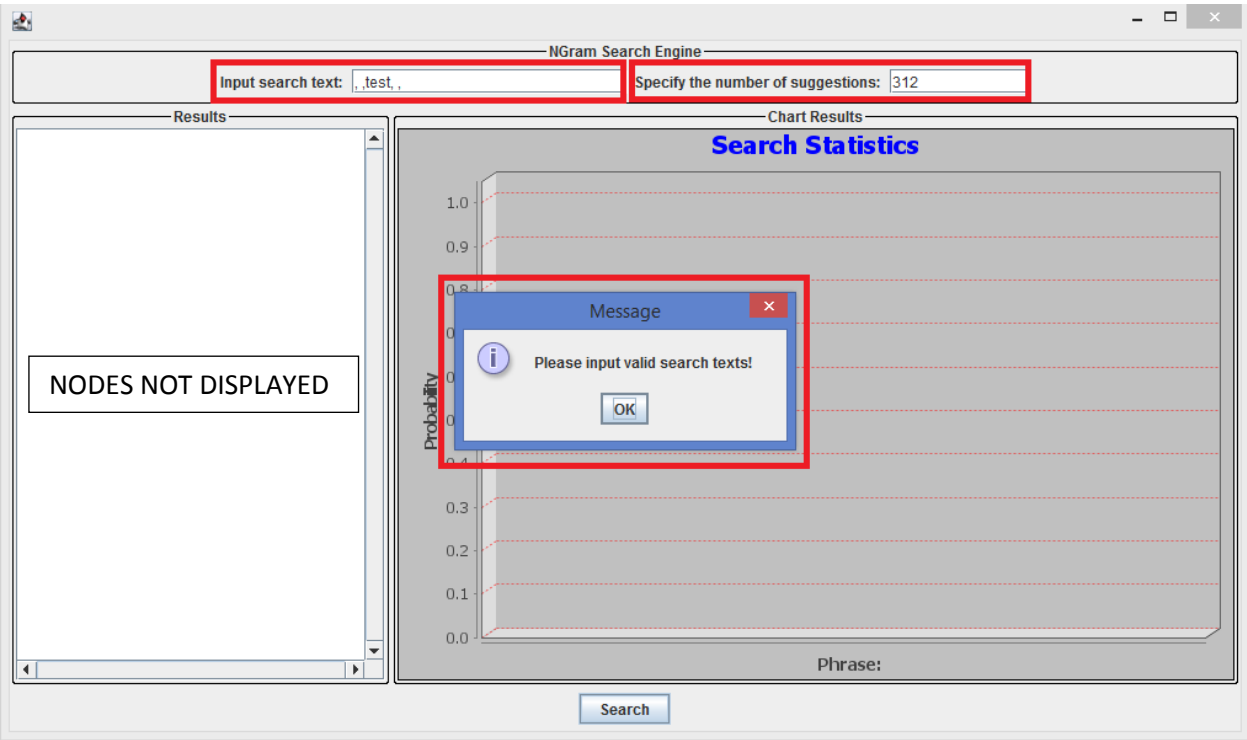


Screenshot 19

When a user inputs a search string "**# *, , , , % ^ 2 3 4 $&@ 976 +-^**" specifies the number of suggestions as some random value '**207**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 19**.

<u>Test Case 19</u>: Input Search Text: , ,test, ,

Number of Suggestions specified by the user: 312

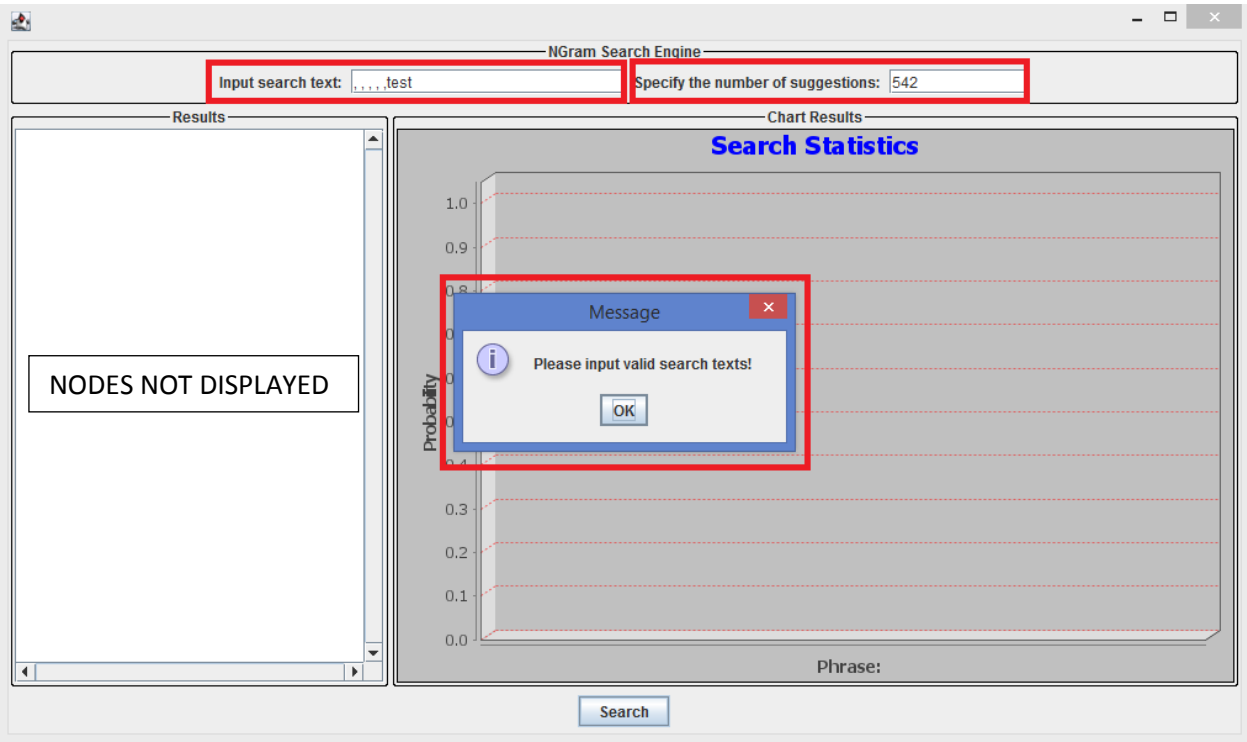


Screenshot 20

When a user inputs a search string "**, ,test, ,**" specifies the number of suggestions as some random value '**312**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 20**.

<u>Test Case 20</u>: Input Search Text: , , , , ,test

Number of Suggestions specified by the user: 542

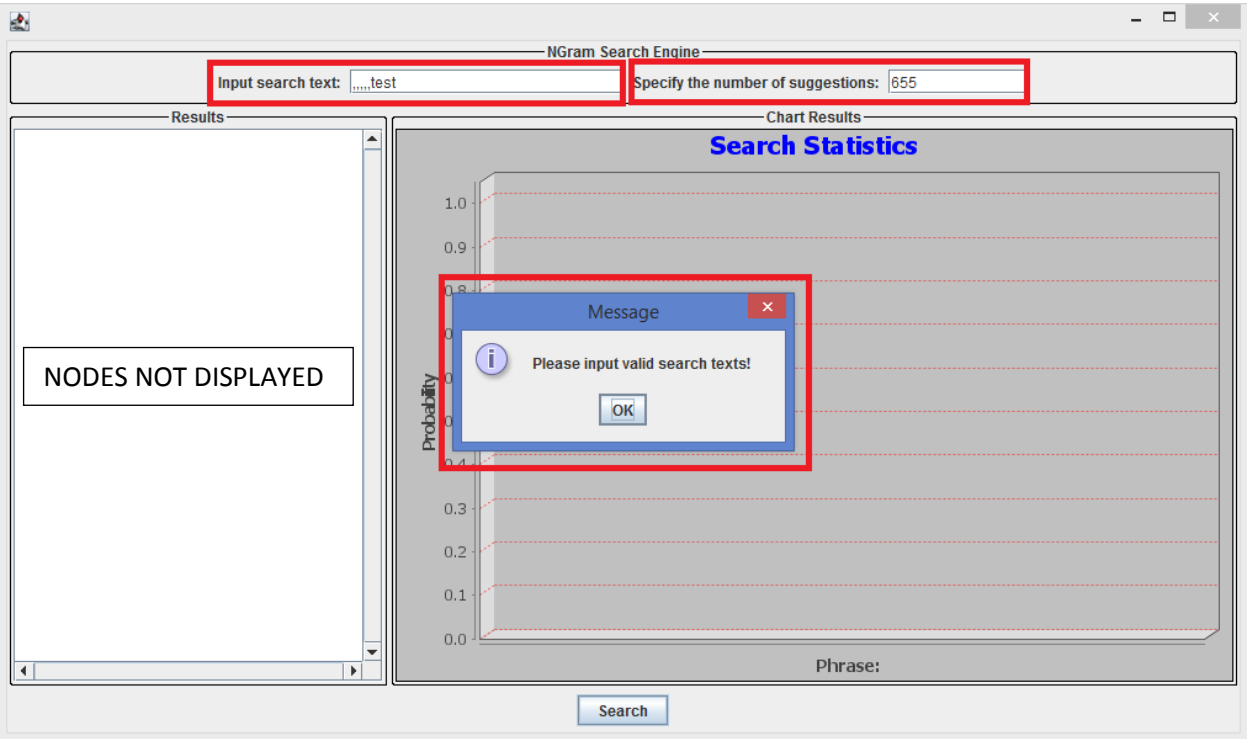


Screenshot 21

When a user inputs a search string **"**, , , , ,**test**" specifies the number of suggestions as some random value '**542**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 21**.

<u>Test Case 21</u>: Input Search Text: ,,,,,test

Number of Suggestions specified by the user: 655

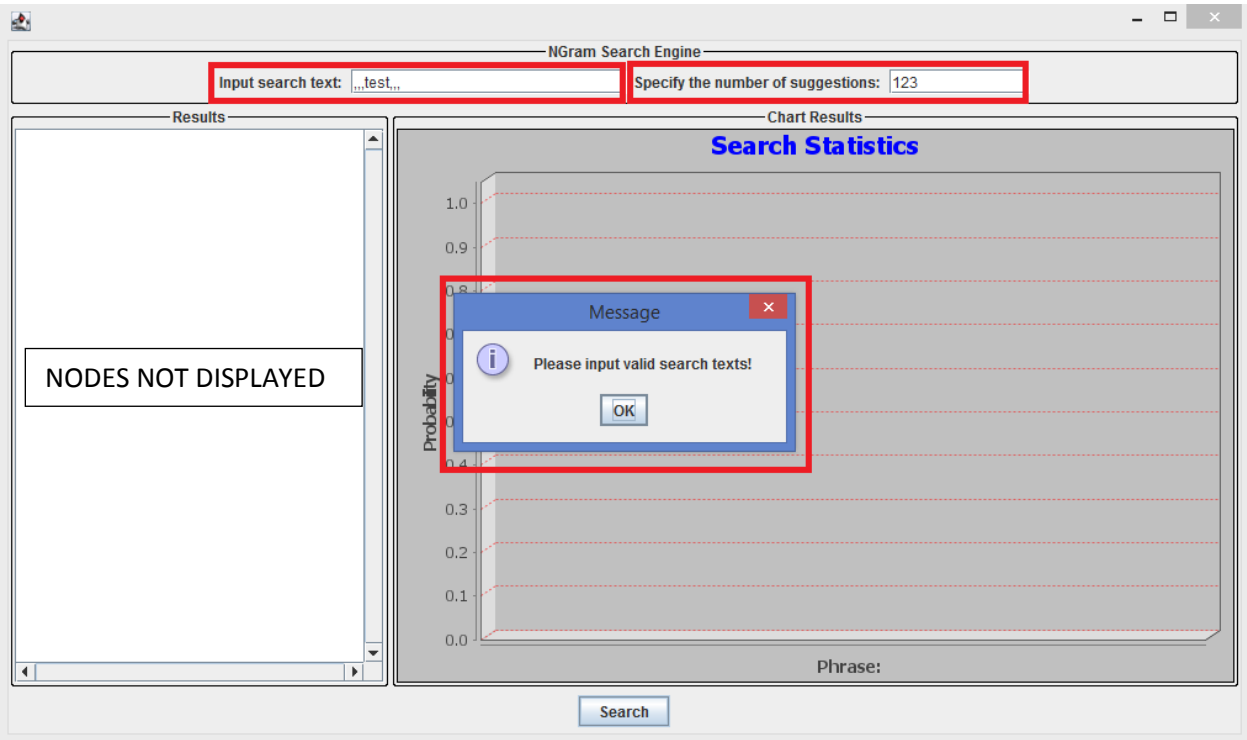


Screenshot 22

When a user inputs a search string **",,,,,test"** specifies the number of suggestions as some random value '**655**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 22**.

<u>Test Case 22</u>: Input Search Text: ,,,test,,,

Number of Suggestions specified by the user: 123

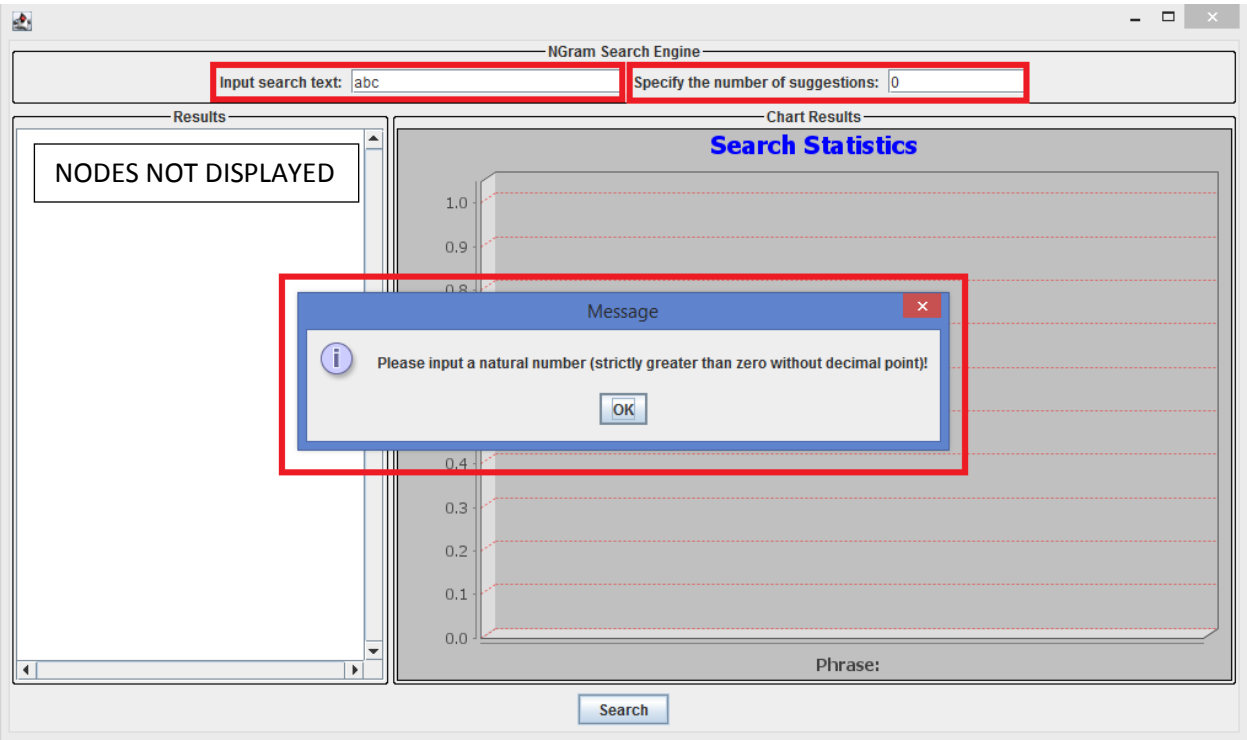


Screenshot 23

When a user inputs a search string "**abc**" specifies the number of suggestions as some random value '**123**' and then clicks on the "**Search**" button, an error message "**Please input valid search texts**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also not shown on the NGram GUI as indicated in the above **Screenshot 23**.

<u>Test Case 23</u>: Input Search Text: abc

Number of Suggestions specified by the user: 0

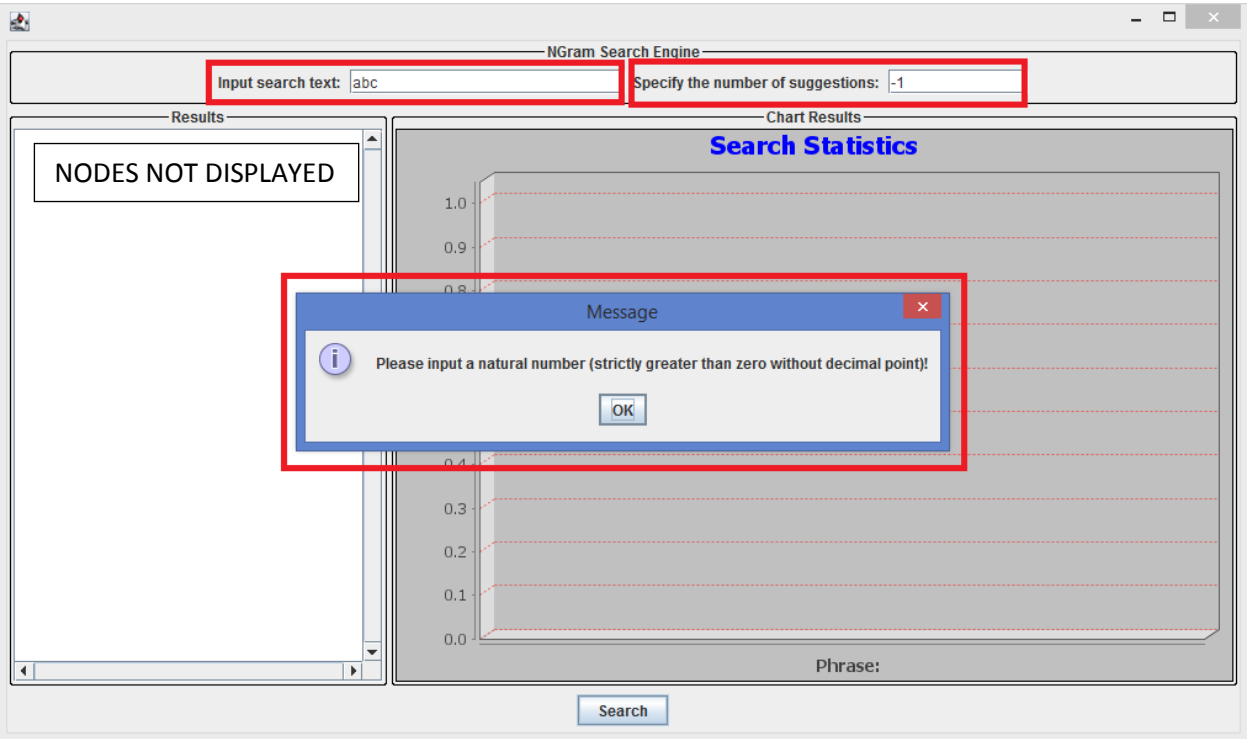


Screenshot 24

When a user inputs a search string "**abc**" specifies the number of suggestions as some random value '**0**' and then clicks on the "**Search**" button, an error message "**Please input a natural number (strictly greater than zero without decimal point)!**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also NOT shown on the NGram GUI as indicated in the above **Screenshot 24**.

<u>Test Case 24</u>: Input Search Text: abc

Number of Suggestions specified by the user: -1



Screenshot 25

When a user inputs a search string "**abc**" specifies the number of suggestions as some random value '**-1**' and then clicks on the "**Search**" button, an error message "**Please input a natural number (strictly greater than zero without decimal point)!**" is displayed on a dialog box and the corresponding search results of the NGram node are also **NOT displayed** i.e., the store is empty and the probability graph is also NOT shown on the NGram GUI as indicated in the above **Screenshot 25**.