|  |  |  |
| --- | --- | --- |
| No. | Test cases |  |
| 1 | Title,FirstName,SecondName,LastName  Mr,”A”””,Arik,Dim  Mrs, X,H,Ant  p,q,r,s | CORRECT |
| 2 | Title,FirstName,SecondName,LastName  Mr,"A" "",Arik,Dim  Mrs,X,H,Ant  p,q,r,s | ERROR: In line 2, first quote is for opening, second one is unescape, 4th one escape the fifth one. so The opening quote remain unclose.  **Both due to the improper closing quote**  1: UNESCAPE QUOTE: at line 2  2: record 1 spanning line 2 to 4 : has less than the required data  3: UNCLOSE OPEN QUOTE : at line 2 |
| 2 | Title,FirstName,SecondName,LastName  Mr,"A"""Arik,Clear  Mrs,X,H,Ant  p,q,r,s | Error:  1: UNESCAPE QUOTE: at line 2  2: record 1 spanning line 2 to 4 : has less than the required data  3: UNCLOSE OPEN QUOTE : at line 2 |
| 3 | Title,FirstName,SecondName,LastName  Mr,"A""  ""g",Arik,Clear  Mrs,X,"H  ,  y",Ant  p,q,r,s  a,aa,a,a  a,"b""  ""a",c,d  w,"x  ,  x",y,z  p,q,r,s | CORRECT |
| 4 | Title,FirstName,SecondName,LastName  Mr,A""  ""g",Arik,Clear  Mrs,X,"H  ,  y",Ant  p,q,r,s  a,aa,a,a  a,b""  ""a",c,d  w,"x  ,  x",y,z  p,q,r,s | Errors  1: UNENCLOSED QUOTE: at line 2  2: UNENCLOSED QUOTE: at line 2  3: record 2 spanning line 2 to 2 : has less than the required data  4: record 3 spanning line 3 to 3 : has less than the required data  5: UNESCAPE QUOTE: at line 4  6: record 4 spanning line 4 to 4 : has less than the required data |

Error correction Test cases

jScroolBar.setRowHeaderView(textLineNumber);

|  |  |  |  |
| --- | --- | --- | --- |
|  | Error | Correction | Errors description |
| 05 | Title,FirstName,SecondName,LastName  Mr,"A  "g",Arik,Clear  Mrs,X,"H"y",Ant  Mrs,A,J""ee,Asif  ""Ms",Ada,Jee,Rose  p,q,r,s  a,aa,a,a  a,"b  "a",c,d  a,"b"a",c,d  w,x""x,y,z  w,xx,y,z""  ""w",xx,y,z  p,q,r,s | Title,FirstName,SecondName,LastName  Mr,"A  ""g",Arik,Clear  Mrs,X,"H""y",Ant  Mrs,A,"J""ee",Asif  """Ms",Ada,Jee,Rose  p,q,r,s  a,aa,a,a  a,"b  ""a",c,d  a,"b""a",c,d  w,"x""x",y,z  w,xx,y,"z"""  """w",xx,y,z  p,q,r,s | >>>Errors :  1: UNESCAPE QUOTE: at line 3. CORRECTED, it has been escaped  2: UNESCAPE QUOTE: at line 4. CORRECTED, it has been escaped  3: UNENCLOSED QUOTE: at line 5. CORRECTED it has been enclosed  4: UNENCLOSED QUOTE: at line 5. CORRECTED it has been enclosed  5: UNENCLOSED QUOTE: at line 6. CORRECTED it has been enclosed  6: UNENCLOSED QUOTE: at line 6. CORRECTED it has been enclosed  7: UNESCAPE QUOTE: at line 7. CORRECTED, it has been escaped |
|  | a,aa,a,a  a,"b  "a",c,d  a,"b"a",c,d  w,x""x,y,z  w,x""x,y,z  p,q,r,s |  |  |
|  |  |  |  |

Data type validation

|  |  |  |
| --- | --- | --- |
| 06 | ID,Name,StartDate,FinishDate,Email  aha16,abdul,29/02/2014,31/04/2014,”a””ha@student.le.ac.uk” | -29 is a leap day, 2014 does not have.  -April contain 30 days.  -Email should not contain quote |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| 01 | Value spanning multi line are handled correctly |  |
| 02 | Opening quote and closing quote, have to be at the beginning or at the ending of a value |  |
| 03 | Odd number of quote are handle carefully |  |
| 04 | Missing closing quote are handle properly |  |
| 05 | Missing opening quote |  |
| 06 | Comma inside quote are ignored |  |
| 07 | Quote has to be escaped and enclose |  |
| 08 | empty value and record are carefully recorded |  |
| 09 | Handle unclosing quote at the ending of the data |  |
| 10 | Number of values less than the number of fields |  |
| 11 | Number of values more than the number of fields |  |
| 12 | Escaping closing quote is properly handle |  |
|  |  |  |
| 13 | Incorrect date value include leap year is properly detected |  |
| 14 | Invalid number value is also detected |  |
| 15 | Invalid email format is detected properly |  |
| 16 | Invalid Yes/No answer is properly handle using boolean data type |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Errors** |  |  |
|  |  |  |
| Number of values are less than the number of fields | Incomplete record |
| Number of values are more than the number of fields | More than the expected values |
| New line character not enclose. | Value spanning more than one line. |
| 'value1, value2, value3, value4, value5 | Missing closing quote(single opening quote ) |
| va"lue1, value2, value3, value4, value5 | Unescape quote and not enclose |
| val""ue1, value2, value3, value4, value5 | Double quote not enclosed in quote |
| 'val"ue1, value2, value3, value4, value5 | Opening quote, unescape quote |
| 'val""ue1, value2, value3, value4, value5 | Missing closing quote |
| 'val""ue1, value2, value3, value4, value5' | Enclosed as one value, incomplete record. number values is less than the header fields. |
| value1, value2, value3, value4, value5' | Missing opening. Closing quote only |
| val"ue1, value2, value3, value4, value5' | Missing escape and opening |
| 'val"ue1, value2, value3, value4, value5' | Unescape quote |
| val""ue1, value2, value3, value4, value5" | Missing opening quote and escape quote |
| """value1, value2, value3, value4, value5 | Triple quote →resulting in unescape quote, and not enclose |
| va"""lue1, value2, value3, value4, value5 | Triple quote,-> unescape quote |
| val""""ue1, value2, value3, value4, value5 | Not enclosed in quote |
| 'val"""ue1, value2, value3, value4, value5' | Escape and non escape quote, incomplete record,  Enclosed as one value, number of values is less than the header fields |
| """v”alue1, value2, value3, value4, value5 | Triple quote ->escape and unescape quote, another unescape quote |
| """v""alue1, value2, value3, value4, value5 | Triple quote ->escape and unescape quote, escape quote |
| value1, value2, value3, value4, value5""' | Missing opening, escape quote with closing quote only. |
| 'value1, val”””ue2, value3, value4, value5 | Missing closing, escape quote, non escape quote closing quote, only. |
| 'val""""ue1, value2, value3, value4, value5 | Double escape quote, missing closing quote |
| val""""ue1, value2, value3, value4, value5' | Double escape quote, missing opening quote |

**About the parser implementation**

Single Quote (') Enclose value

-It could be used as opening quote: -> previous non space character should be , or \n or non escape quote

-It could be used as closing quote: -> next non space character should be , or \n and it should not have been escaped.

-It could be used as part of a value: -> It should be escaped by a quote that has not beed escape

Double Quote (") Escape character

It could be used as escape character to escape functional symbols( " or ' )

It could be used as part of value -> It should be escaped

Comma (,) separate values: determine the end of a value if it has not been enclosed

EndLine(\n) separate records: determine the end of a record if it has not been enclosed

a,b,'c""

d'

e,f,g

>>>>>>>>>>>>>>>>>ERRORS GROUPS