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SFT221NFF

Main.c

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| Line Containing Bug | Corrected Version | What Was Wrong | Debug Tool/Technique |
| Line 8-9 : char testStr[] = { "This is a\n string with embedded newline  character and \n12345 numbers inside it as well 67890" }; | char testStr[] = { "This is a\nstring with embedded newline character and \n12345 numbers inside it as well 67890" }; | Compiler was giving syntax error. Brought the second line of quote to the same line as variable. | Compiler Error Messages |

Stringhelp.c

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| Line Containing Bug | Corrected Version | What Was Wrong | Debug Tool/Technique |
| Line 23-25: result = result && isdigit(str[i]);  return result; | if (!isdigit(str[i]))  {  result = 0;  }  Removed && and used an if statement. | Logical AND was unnecessary and could lead to early loop termination. | Code review and static analysis. |
| Line 42-49: while (str[i] != '\0' && isspace(str[i]))  {  if (str[i] == '\n')  {  result.lineStarts[result.numLines] = i + 1;  }  i++;  } | result.lineStarts[result.numLines++] = i + 1; | New lines were not being correctly recorded missing increment for numlines. | Debugger: Step through and watch variables |
| Line 88: ((struct StringIndex\*)idx)->numWords--; | //((struct StringIndex\*)idx)->numWords--; | Incorrectly decrementing numWOrds when retrieving a word | Static analysis |
| Line 51: if (isNumber(str + i, sp - i + 1)) | if (sp > 0 && isNumber(str + i, sp)) | Original code improperly included an extra char when determining if a substring is a number, causing incorrect classification of words as nums. | Debugger Step through and inspect variables |