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## KWIC\_Archillects

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KeyWord-In-Context (KWIC) system - Software Design and Architecture Activity

The KWIC index system accepts an ordered set of lines; each line is an ordered set of words, and each word is an ordered set of characters. Any line may be “circularly shifted” by repeatedly removing the first word and appending it at the end of the line. The KWIC index system outputs a list of all circular shifts of all lines in alphabetical order.

KeyWord-In-Context (KWIC) system

**input:** strings, each of which consists of several words.

**output:** a sorted list of all orderings of each input string.

Example of KWIC operation

- **input**

“Clouds are white.”

“Pittsburgh is beautiful.”

- **output**

are white clouds

beautiful pittsburgh is

clouds are white

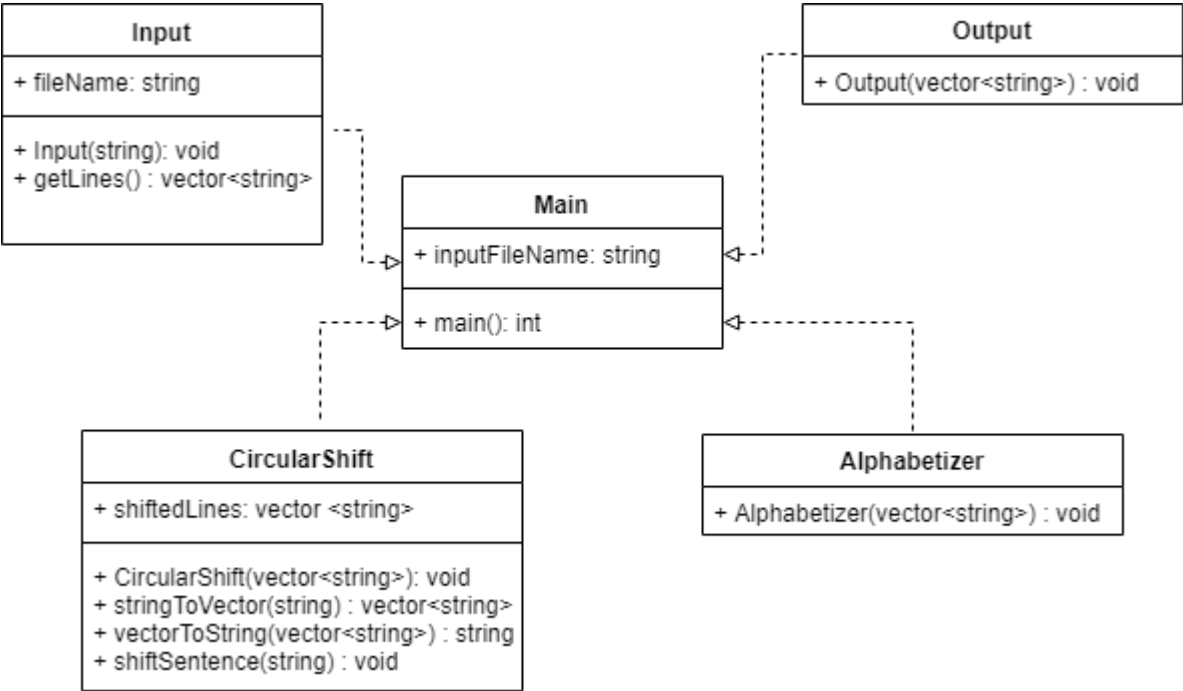
is beautiful pittsburgh

pittsburgh is beautiful

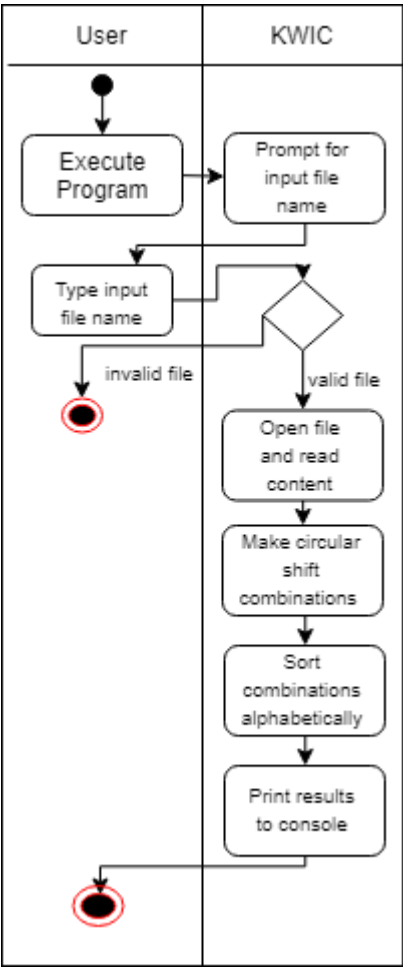
white clouds are

## Software Architecture

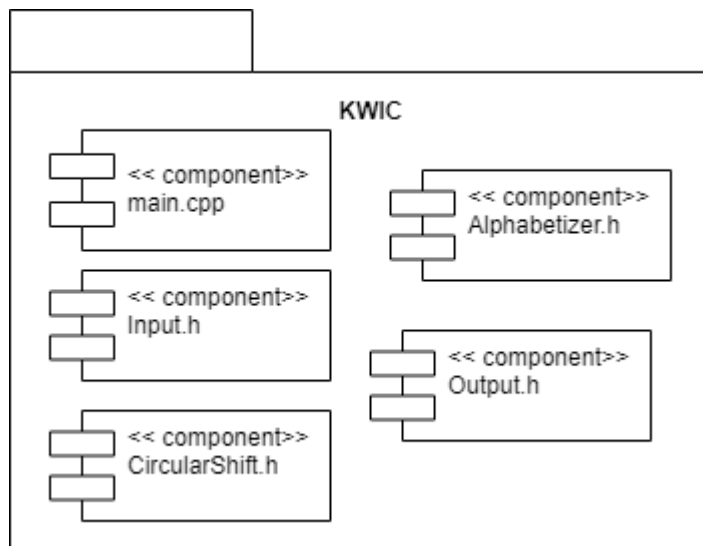
Logic View



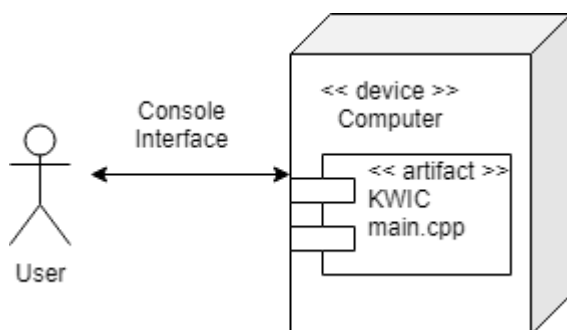
Process View



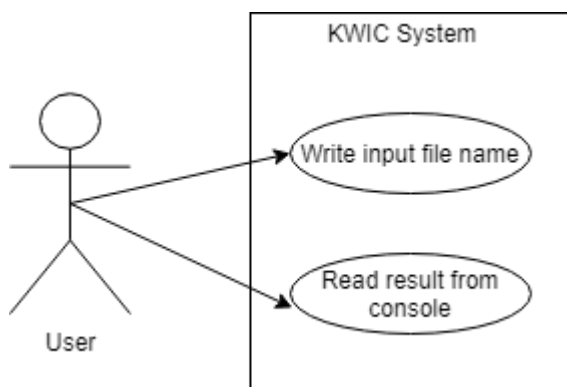
Development View



## Physical View



## Scenario View



## How to Run

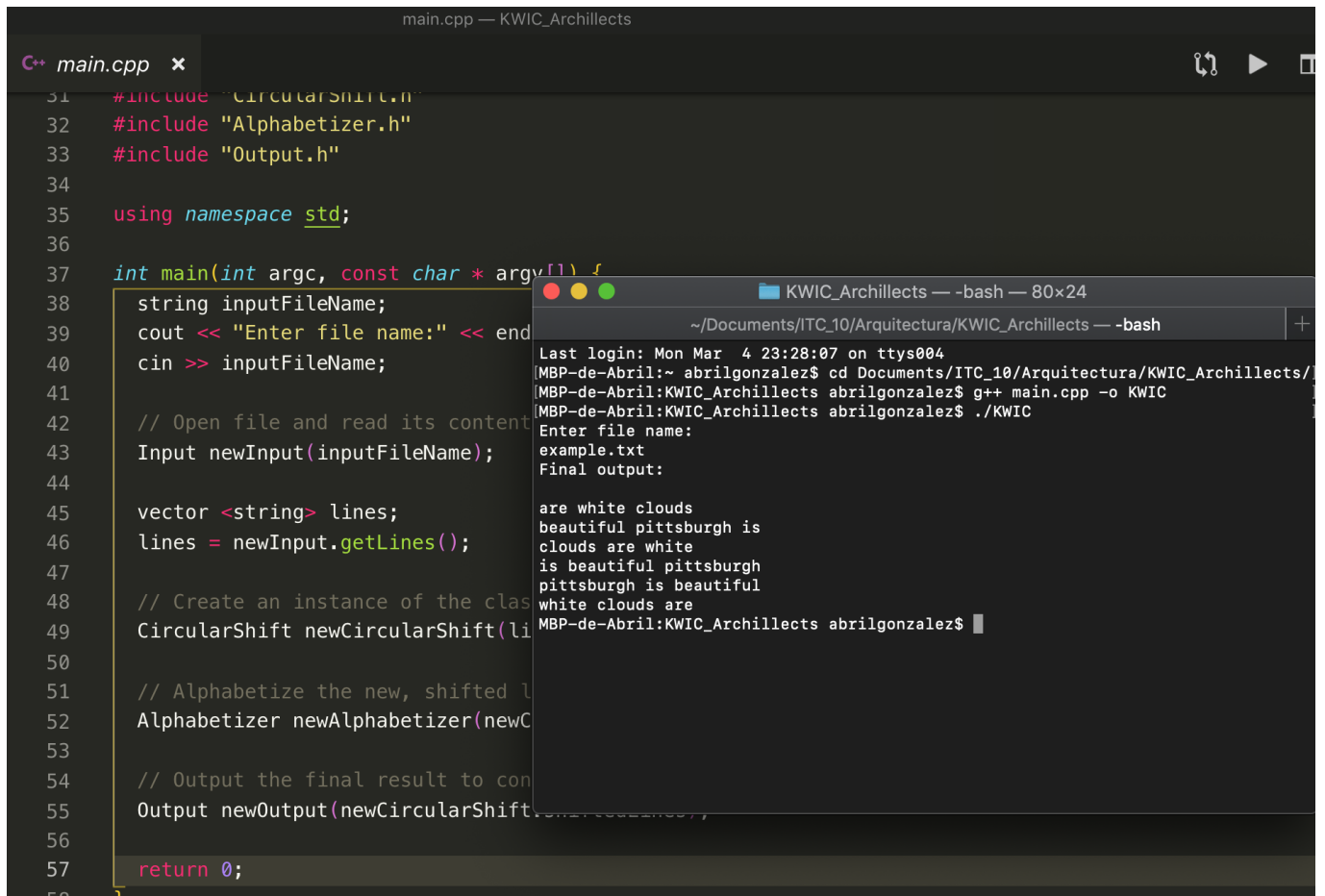
Compile and run from terminal

```
g++ main.cpp -o KWIC
./KWIC
```

Write input

```
example.txt
```

## Result



```
main.cpp — KWIC_Archillects
main.cpp x
31 #include "CircularShift.h"
32 #include "Alphabetizer.h"
33 #include "Output.h"
34
35 using namespace std;
36
37 int main(int argc, const char * argv[]) {
38     string inputFileName;
39     cout << "Enter file name:" << endl;
40     cin >> inputFileName;
41
42     // Open file and read its content
43     Input newInput(inputFileName);
44
45     vector<string> lines;
46     lines = newInput.getLines();
47
48     // Create an instance of the class
49     CircularShift newCircularShift(lines);
50
51     // Alphabetize the new, shifted lines
52     Alphabetizer newAlphabetizer(newCircularShift);
53
54     // Output the final result to console
55     Output newOutput(newCircularShift);
56
57     return 0;
58 }
```

KWIC\_Archillects — -bash — 80x24  
~/Documents/ITC\_10/Arquitectura/KWIC\_Archillects — -bash

Last login: Mon Mar 4 23:28:07 on ttys004  
[MBP-de-Abril:~ abrilgonzalez\$ cd Documents/ITC\_10/Arquitectura/KWIC\_Archillects/  
[MBP-de-Abril:KWIC\_Archillects abrilgonzalez\$ g++ main.cpp -o KWIC  
[MBP-de-Abril:KWIC\_Archillects abrilgonzalez\$ ./KWIC  
Enter file name:  
example.txt  
Final output:  
  
are white clouds  
beautiful pittsburgh is  
clouds are white  
is beautiful pittsburgh  
pittsburgh is beautiful  
white clouds are  
[MBP-de-Abril:KWIC\_Archillects abrilgonzalez\$