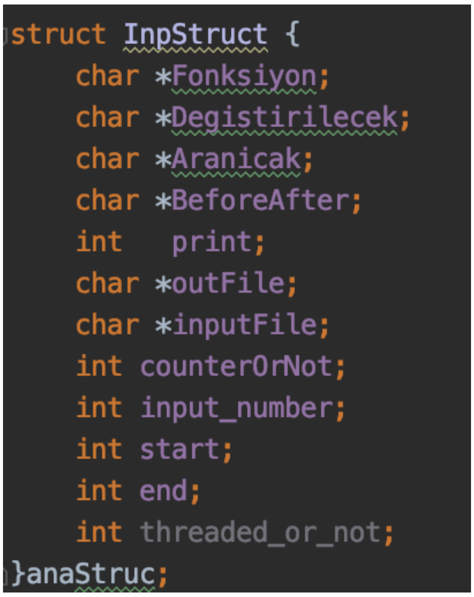
ALİ ARDA İSENKUL CMPE 382 PROJECT #1

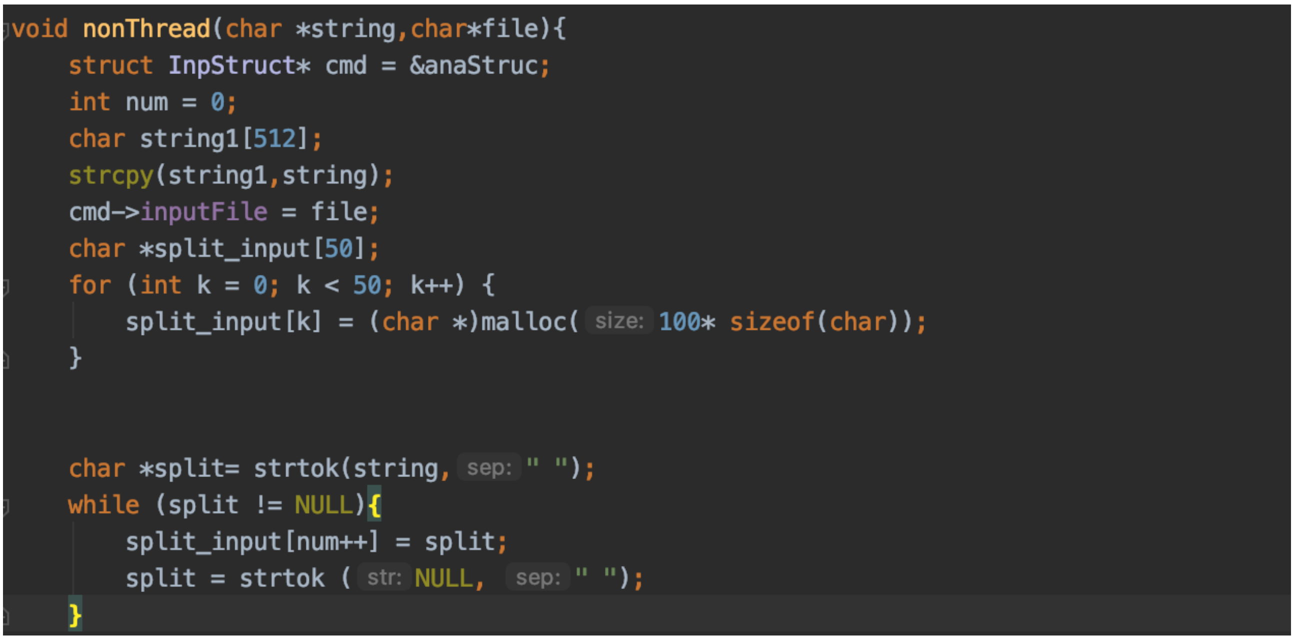
My Project consists of 2 part. First one is a set of simple command-line programs in order to edit a text document, second part is combine them into a single program them in various ways.



```
struct InpStruct {
    char *Fonksiyon;
    char *Degistirilecek;
    char *Aranicak;
    char *BeforeAfter;
    int   print;
    char *outFile;
    char *inputFile;
    int counterOrNot;
    int input_number;
    int start;
    int end;
    int threaded_or_not;
}anaStruc;
```

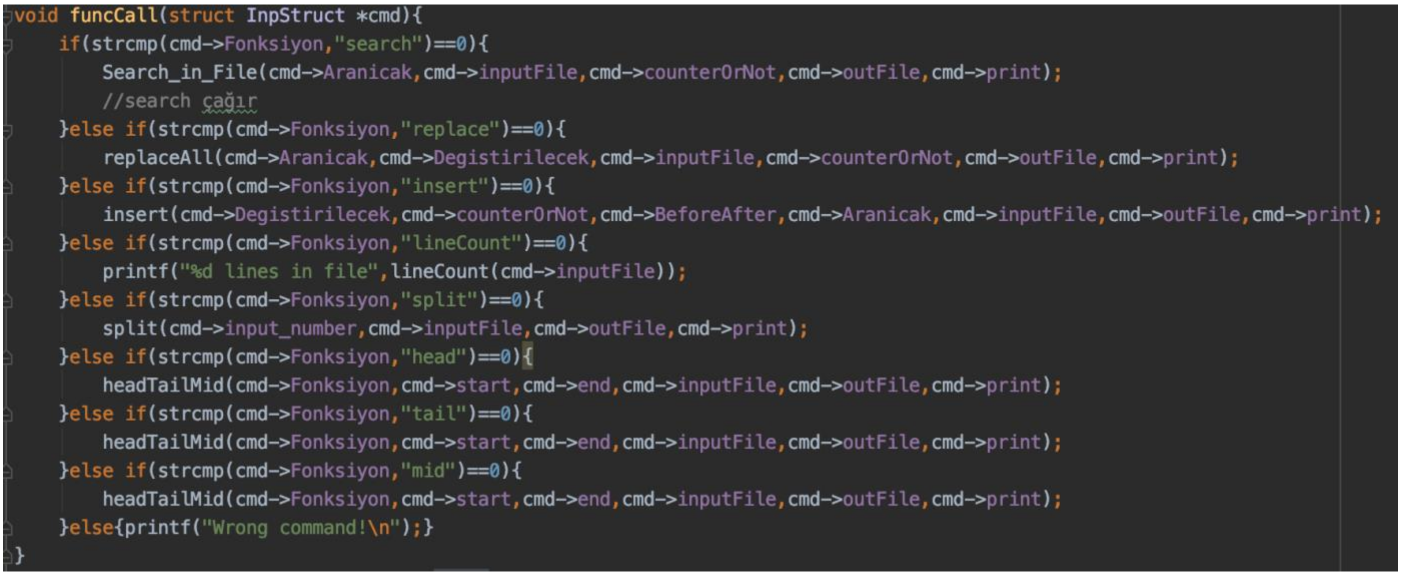
I used struct type to store all data that I might need to use in methods. When I finished to add data to struct, I just need to send struct for funcCall method and it runs the needed method.

In my main method, It aims to parse the input into separate commands according to ‘:’ and ‘;’, for example if the input is like that: search arda -c ; replace arda ayse ; insert kemal -c -b arda file3.txt. It makes it separate and runs the commands as it needed (threaded or not).When it gets a command it calls void nonThread(char *string,char*file) which string is the command(search arda -c) and file is the last word(file3.txt) of sentence.



```
void nonThread(char *string,char*file){
    struct InpStruct* cmd = &anaStruc;
    int num = 0;
    char string1[512];
    strcpy(string1,string);
    cmd->inputFile = file;
    char *split_input[50];
    for (int k = 0; k < 50; k++) {
        split_input[k] = (char *)malloc( size: 100* sizeof(char));
    }


    char *split= strtok(string, sep: " ");
    while (split != NULL){
        split_input[num++] = split;
        split = strtok ( str: NULL,  sep: " ");
    }
```

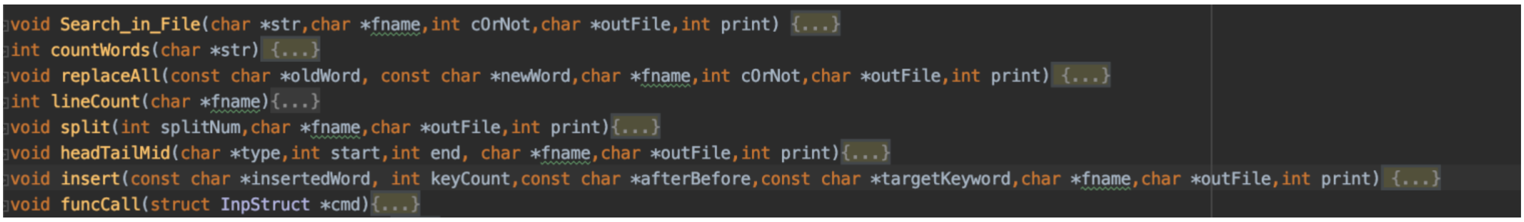
As I said before, I split the user input into pieces and send one command in order. nonThread separates words according to the whitespace and creates Struct for current command. Then this struct sends to funcCall and funcCall calls the desired method (search,insert etc.) and program runs that way.



```
void funcCall(struct InpStruct *cmd){
    if(strcmp(cmd->Fonksiyon,"search")==0){
        Search_in_File(cmd->Aranicak,cmd->inputFile,cmd->counterOrNot,cmd->outFile,cmd->print);
        //search çağır
    }else if(strcmp(cmd->Fonksiyon,"replace")==0){
        replaceAll(cmd->Aranicak,cmd->Degistirilecek,cmd->inputFile,cmd->counterOrNot,cmd->outFile,cmd->print);
    }else if(strcmp(cmd->Fonksiyon,"insert")==0){
        insert(cmd->Degistirilecek,cmd->counterOrNot,cmd->BeforeAfter,cmd->Aranicak,cmd->inputFile,cmd->outFile,cmd->print);
    }else if(strcmp(cmd->Fonksiyon,"lineCount")==0){
        printf("%d lines in file",lineCount(cmd->inputFile));
    }else if(strcmp(cmd->Fonksiyon,"split")==0){
        split(cmd->input_number,cmd->inputFile,cmd->outFile,cmd->print);
    }else if(strcmp(cmd->Fonksiyon,"head")==0){
        headTailMid(cmd->Fonksiyon,cmd->start,cmd->end,cmd->inputFile,cmd->outFile,cmd->print);
    }else if(strcmp(cmd->Fonksiyon,"tail")==0){
        headTailMid(cmd->Fonksiyon,cmd->start,cmd->end,cmd->inputFile,cmd->outFile,cmd->print);
    }else if(strcmp(cmd->Fonksiyon,"mid")==0){
        headTailMid(cmd->Fonksiyon,cmd->start,cmd->end,cmd->inputFile,cmd->outFile,cmd->print);
    }else{printf("Wrong command!\n");}
}
```

funcCall gets the struct and sends its values to desired method. Purple variables are parameters for functions.

I implemented this in infinite loop, but if the user writes “quit”, then the program stops running.



```
void Search_in_File(char *str,char *fname,int cOrNot,char *outFile,int print) {...}
int countWords(char *str) {...}
void replaceAll(const char *oldWord, const char *newWord,char *fname,int cOrNot,char *outFile,int print) {...}
int lineCount(char *fname){...}
void split(int splitNum,char *fname,char *outFile,int print){...}
void headTailMid(char *type,int start,int end, char *fname,char *outFile,int print){...}
void insert(const char *insertedWord, int keyCount,const char *afterBefore,const char *targetKeyword,char *fname,char *outFile,int print) {...}
void funcCall(struct InpStruct *cmd){...}
```

search <keyword> [-c] <inFile>
prints each line that contains the keyword, contols -c or > for output or count number.

- **replace <targetKeyword> <sourceKeyword> [-c] <inFile>**

Replace 2 words and checks for -c and > for output and count number

- **insert <insertedkeyword> [-c] <-a OR -b> <targetkeyword> <inFile>**
Inserts keyword after or before another Word, checks for c and > for output and count number

- **lineCount <inFile>**
Counts the number of lines in the input File and prints it

- **split <CharacterCount> <inFile>**
Split command splits the lines in the input file into multiple lines. Checks for c and > for output and count number

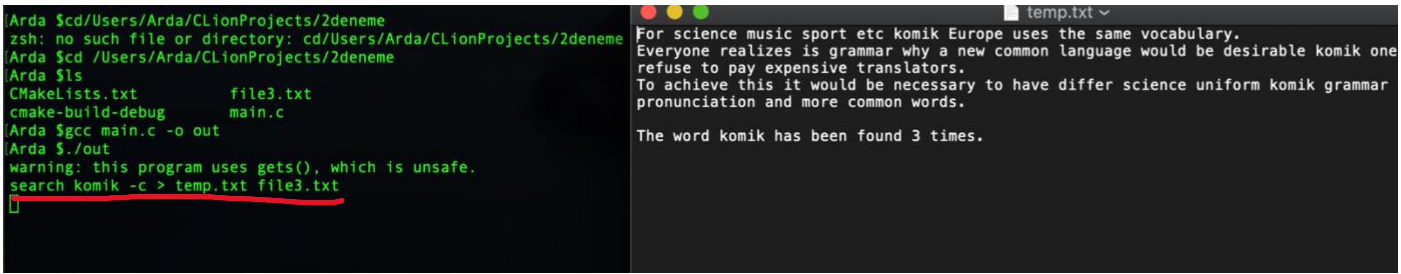
- **head <lineCount> <inFile>**
Prints the first "lineCount" lines in the input File

- **tail <lineCount> <inFile>**
Prints the last "lineCount" lines in the input File

- **mid <startLine> <endLine> <inFile>**
Prints the lines between "startline" and "endline" in the input File

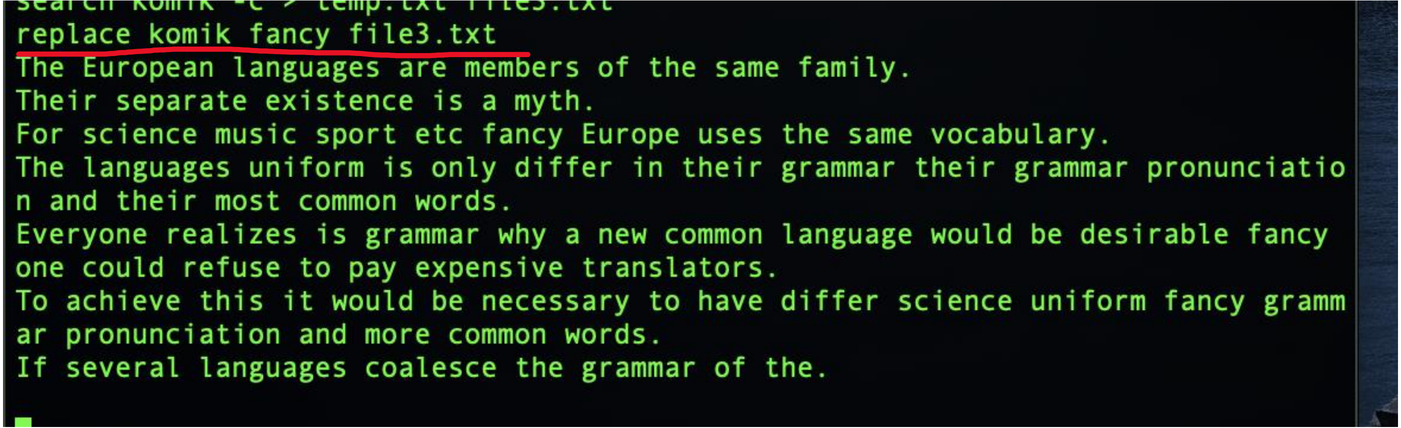
For the second part, I implement the logic of separate combined methods includes ‘:’ ,‘;‘ and ‘>’. When there is a ‘>’ mark, program writes the result to the next filename of > mark. search arda > tempFile.txt file3.txt . tempFile will be created and result of search method will be written in it.

EXAMPLES

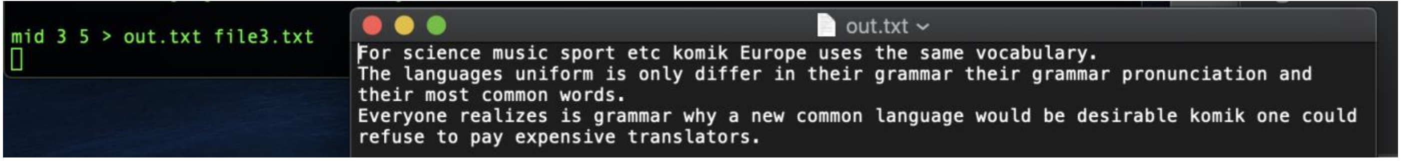


```
[Arda $cd/Users/Arda/CLionProjects/2deneme
zsh: no such file or directory: cd/Users/Arda/CLionProjects/2deneme
[Arda $cd /Users/Arda/CLionProjects/2deneme
[Arda $ls
CMakeLists.txt          file3.txt
cmake-build-debug       main.c
[Arda $gcc main.c -o out
[Arda $./out
warning: this program uses gets(), which is unsafe.
search komik -c > temp.txt file3.txt
```

```
For science music sport etc komik Europe uses the same vocabulary.
Everyone realizes is grammar why a new common language would be desirable komik one
refuse to pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar
pronunciation and more common words.

The word komik has been found 3 times.
```

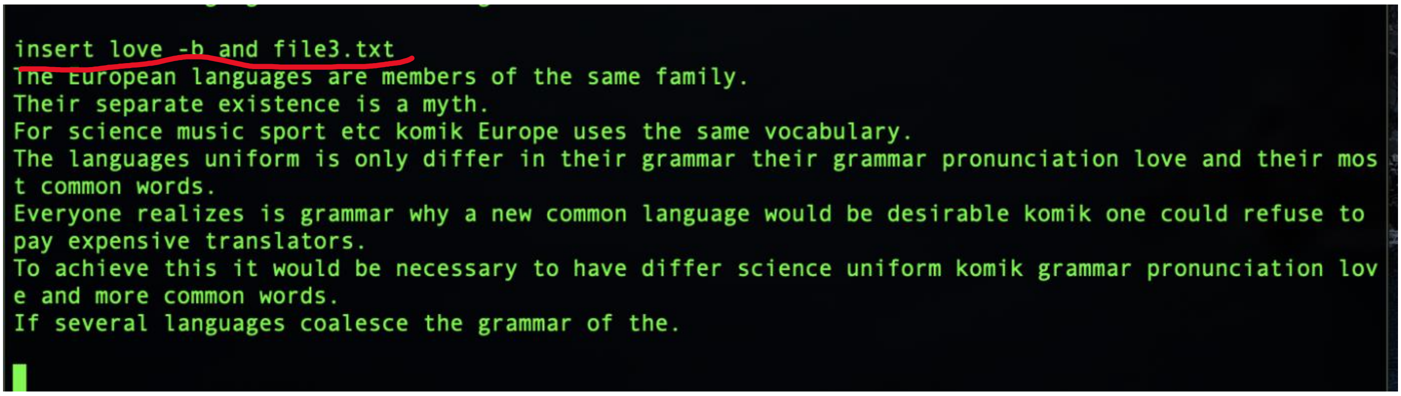


```
search komik -c > temp.txt file3.txt
replace komik fancy file3.txt
The European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc fancy Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciatio
n and their most common words.
Everyone realizes is grammar why a new common language would be desirable fancy
one could refuse to pay expensive translators.
To achieve this it would be necessary to have differ science uniform fancy gramm
ar pronunciation and more common words.
If several languages coalesce the grammar of the.
```

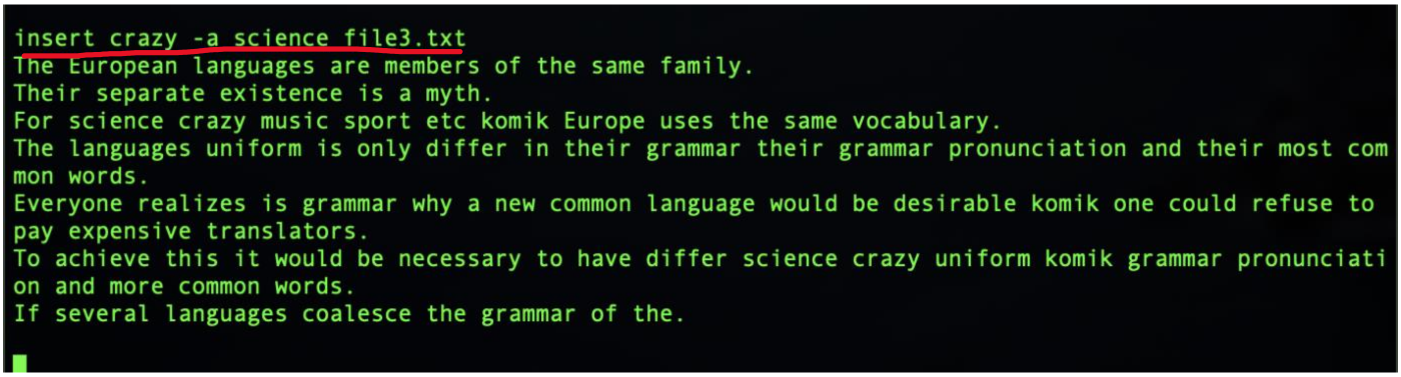


```
mid 3 5 > out.txt file3.txt
```

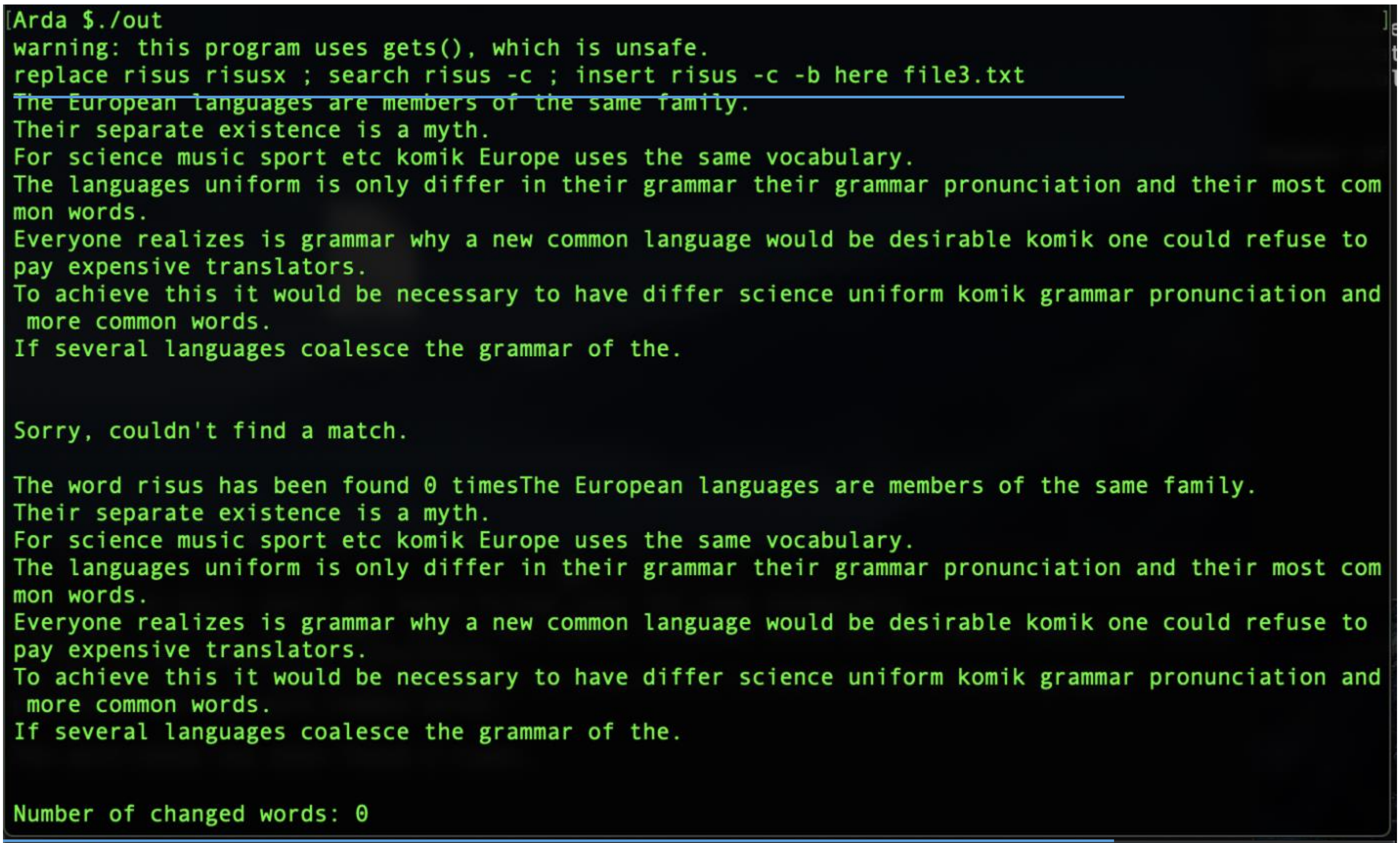
```
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and
their most common words.
Everyone realizes is grammar why a new common language would be desirable komik one could
refuse to pay expensive translators.
```



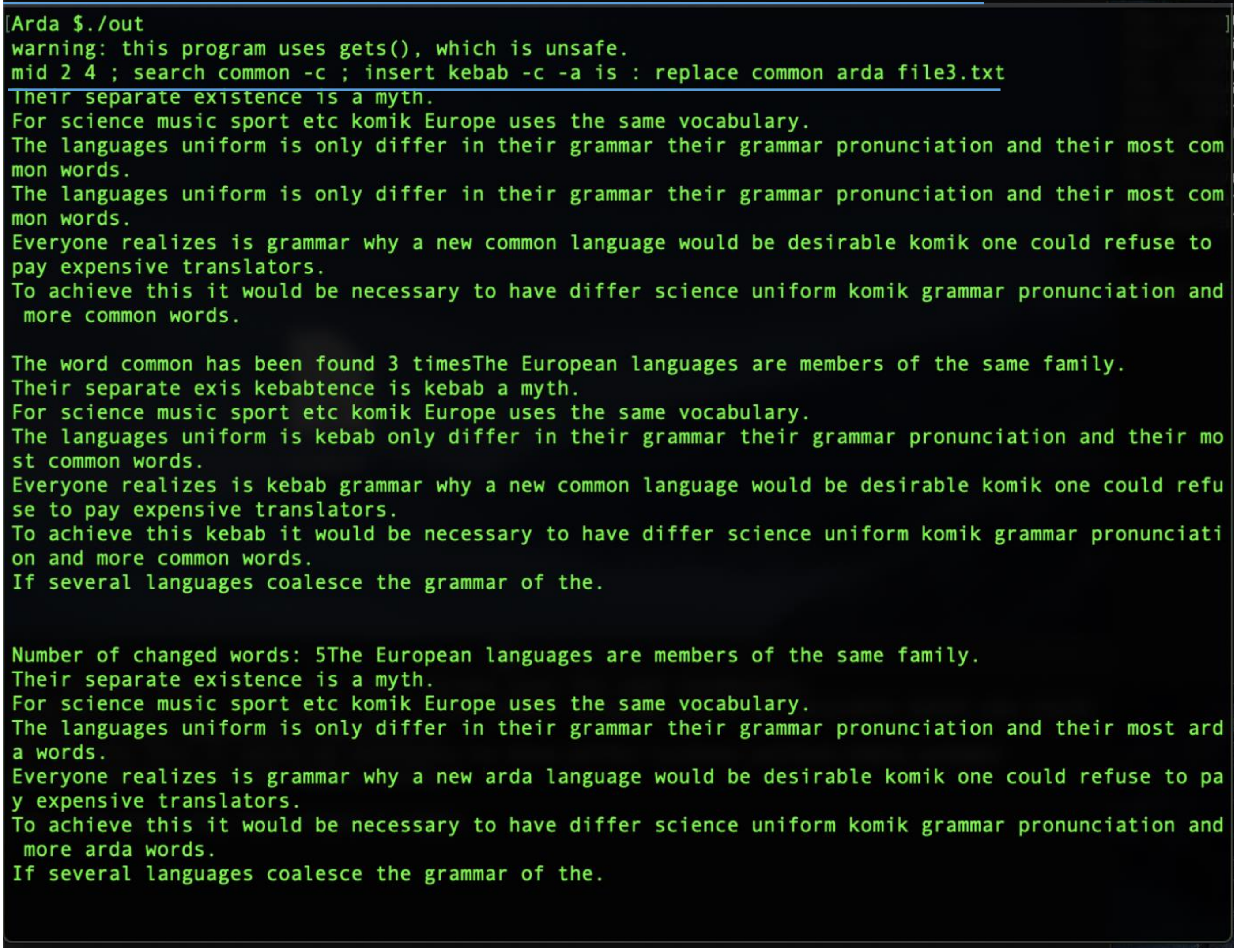
```
insert love -b and file3.txt
The European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation love and their mos
t common words.
Everyone realizes is grammar why a new common language would be desirable komik one could refuse to
pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar pronunciation lov
e and more common words.
If several languages coalesce the grammar of the.
```



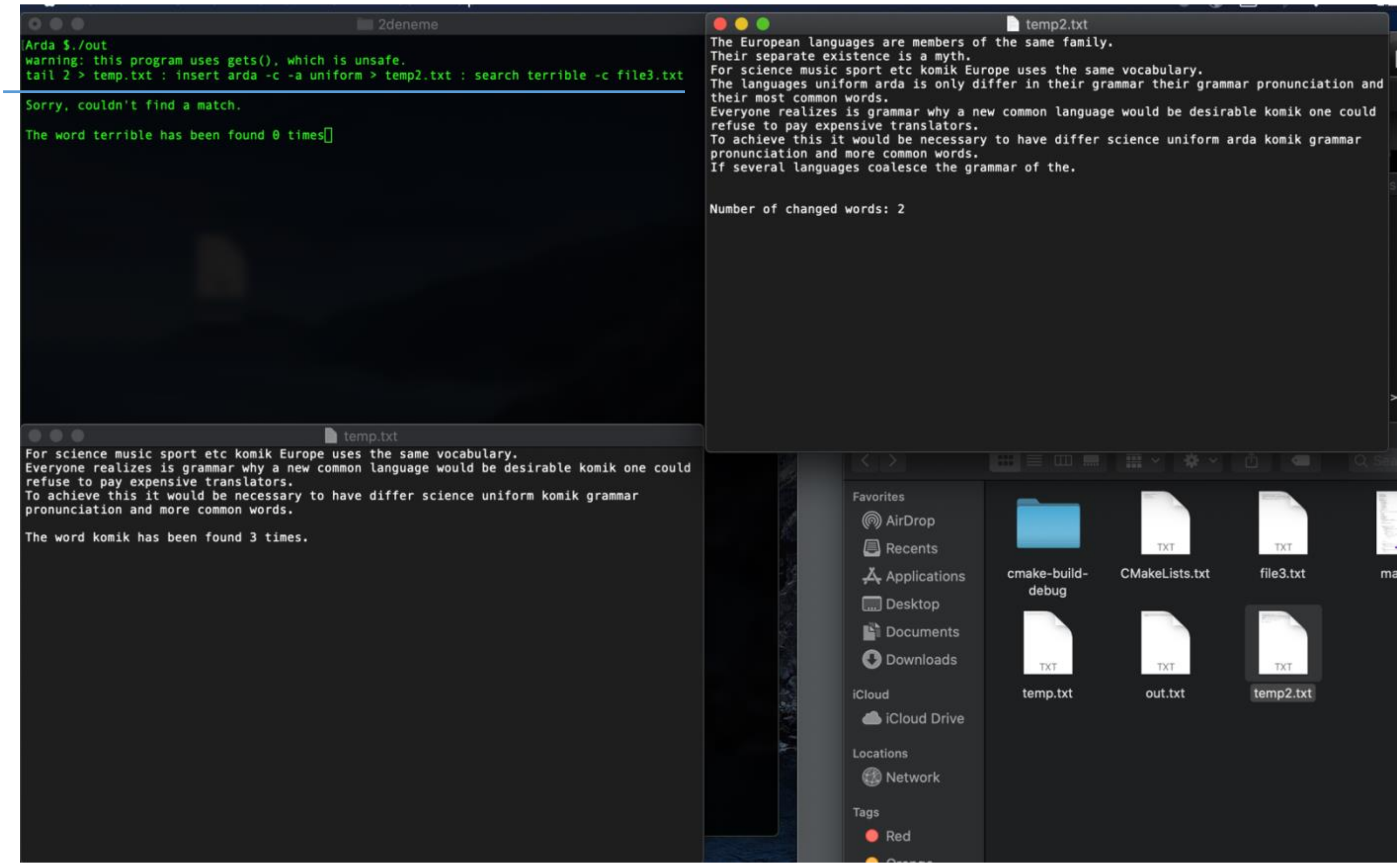
```
insert crazy -a science file3.txt
The European languages are members of the same family.
Their separate existence is a myth.
For science crazy music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and their most com
mon words.
Everyone realizes is grammar why a new common language would be desirable komik one could refuse to
pay expensive translators.
To achieve this it would be necessary to have differ science crazy uniform komik grammar pronunciati
on and more common words.
If several languages coalesce the grammar of the.
```



```
[Arda $./out
warning: this program uses gets(), which is unsafe.
replace risus risusx ; search risus -c ; insert risus -c -b here file3.txt
The European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and their most com
mon words.
Everyone realizes is grammar why a new common language would be desirable komik one could refuse to
pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar pronunciation and
 more common words.
If several languages coalesce the grammar of the.


Sorry, couldn't find a match.

The word risus has been found 0 timesThe European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and their most com
mon words.
Everyone realizes is grammar why a new common language would be desirable komik one could refuse to
pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar pronunciation and
 more common words.
If several languages coalesce the grammar of the.


Number of changed words: 0
```



```
[Arda $./out
warning: this program uses gets(), which is unsafe.
mid 2 4 ; search common -c ; insert kebab -c -a is : replace common arda file3.txt
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and their most com
mon words.
The languages uniform is only differ in their grammar their grammar pronunciation and their most com
mon words.
Everyone realizes is grammar why a new common language would be desirable komik one could refuse to
pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar pronunciation and
 more common words.

The word common has been found 3 timesThe European languages are members of the same family.
Their separate exis kebabtence is kebab a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is kebab only differ in their grammar their grammar pronunciation and their mo
st common words.
Everyone realizes is kebab grammar why a new common language would be desirable komik one could refu
se to pay expensive translators.
To achieve this kebab it would be necessary to have differ science uniform komik grammar pronunciati
on and more common words.
If several languages coalesce the grammar of the.


Number of changed words: 5The European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform is only differ in their grammar their grammar pronunciation and their most ard
a words.
Everyone realizes is grammar why a new arda language would be desirable komik one could refuse to pa
y expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar pronunciation and
 more arda words.
If several languages coalesce the grammar of the.
```



```
Arda $./out
warning: this program uses gets(), which is unsafe.
tail 2 > temp.txt : insert arda -c -a uniform > temp2.txt : search terrible -c file3.txt

Sorry, couldn't find a match.

The word terrible has been found 0 times
```

```
The European languages are members of the same family.
Their separate existence is a myth.
For science music sport etc komik Europe uses the same vocabulary.
The languages uniform arda is only differ in their grammar their grammar pronunciation and
their most common words.
Everyone realizes is grammar why a new common language would be desirable komik one could
refuse to pay expensive translators.
To achieve this it would be necessary to have differ science uniform arda komik grammar
pronunciation and more common words.
If several languages coalesce the grammar of the.


Number of changed words: 2
```

```
For science music sport etc komik Europe uses the same vocabulary.
Everyone realizes is grammar why a new common language would be desirable komik one could
refuse to pay expensive translators.
To achieve this it would be necessary to have differ science uniform komik grammar
pronunciation and more common words.

The word komik has been found 3 times.
```

I add thread methods and some declaration parts, but I couldn’t worked it properly. Methods run successfully but thread part is working as ‘:’ mark.