

Assignment 1

Question 1:

```

Open  checkerc
~/Desktop
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <math.h>
4 #include <string.h>
5
6 //Custom Function with parameters of 2 files to check how similar to files are
7 int compareFiles(FILE *fpt, FILE *fpt2);
8
9 int main(int argc, char *argv[]) {
10     //Check if the files exist
11     FILE *fpt = fopen("text.txt", "r");
12     FILE *fpt2 = fopen("text2.txt", "r");
13
14     //variable to store the percentage difference of the 2 files
15     int diff;
16
17     //Check if the files exist or if the assignment failed resulting in the application quitting
18     if (fpt == NULL || fpt2 == NULL) {
19         printf("Unable to open one or more files for reading\n");
20         exit(0);
21     }
22
23     //Use the custom functions and assign the return to diff
24     diff = compareFiles(fpt, fpt2);
25
26     //Print the diff
27     printf("The similarities in the documents in a percent is: ");
28     printf("%d", diff);
29     printf("\n");
30
31     //Close the files
32     fclose(fpt);
33     fclose(fpt2);
34
35 }
36
37 //Custom Function is updated
38 int compareFiles(FILE *fpt, FILE *fpt2){
39     //variable to hold the files characters
40     char ch1, ch2;
41     //variables to hold line number and column in order to cycle through the file
42     int line=1;
43     int col=0;
44     //variable to hold number of similar variables
45     int percentage=0;
46     //variable to hold total characters checked
47     int total=0;

```

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Open  checkerc
~/Desktop
46 //variable to hold total characters checked
47 int total=0;
48 //variable to hold the value to be returned
49 double final=0;
50
51
52 //While the first and second file still have character we continue
53 while((ch1!=EOF && ch2!=EOF){
54     //Increment total character every iteration
55     total++;
56     //Increment characters for that iteration
57     ch1=fgetc(fpt);
58     ch2=fgetc(fpt2);
59
60     //If one of the files reach the end of that line
61     if((ch1=='\n' && ch2=='\n'){
62         line++;
63         col=0;
64     }
65
66     //If the characters at the specific location are the same we increment percent and print the location
67     if(ch1==ch2){
68         percentage++;
69         printf("At line: ");
70         printf("%d", line);
71         printf(" and column: ");
72         printf("%d", col);
73         printf(" they are matching");
74         printf("\n");
75     }
76
77     col++;
78 }
79
80 //Since the program will do an extra 2 iteration to check, it must be corrected so the stats are unaffected
81 percentage-=2;
82 total-=2;
83
84 //Final has the calculation
85 final = ((double)percentage/(double)total)*100;
86
87 printf("The last 2 lines with columns were check to see if the file ended and will not be added to the stats.");
88 printf("\n");
89
90 printf("%d", percentage);
91 printf("\n");
92

```

```

//Since the program will do an extra 2 iteration to check, it must be corrected so the stats are unaffected
percentage-=2;
total-=2;

//Final has the calculation
final = ((double)percentage/(double)total)*100;

printf("The last 2 lines with columns were check to see if the file ended and will not be added to the stats.");
printf("\n");

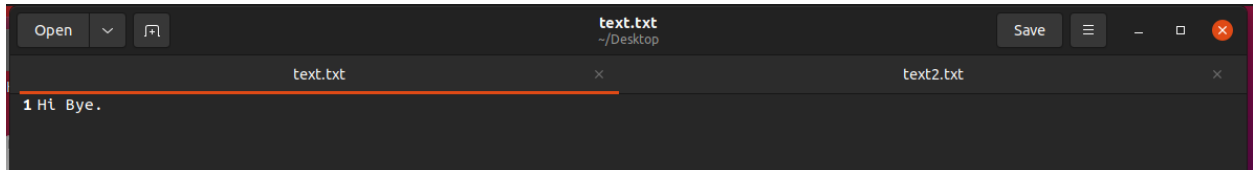
printf("%d", percentage);
printf("\n");

printf("%d", total);
printf("\n");

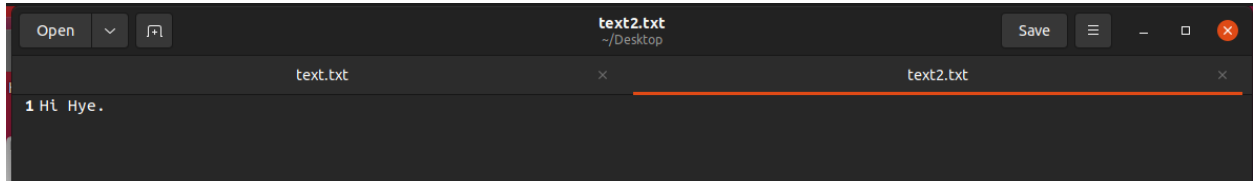
printf("%d", final);
printf("\n");

return final;

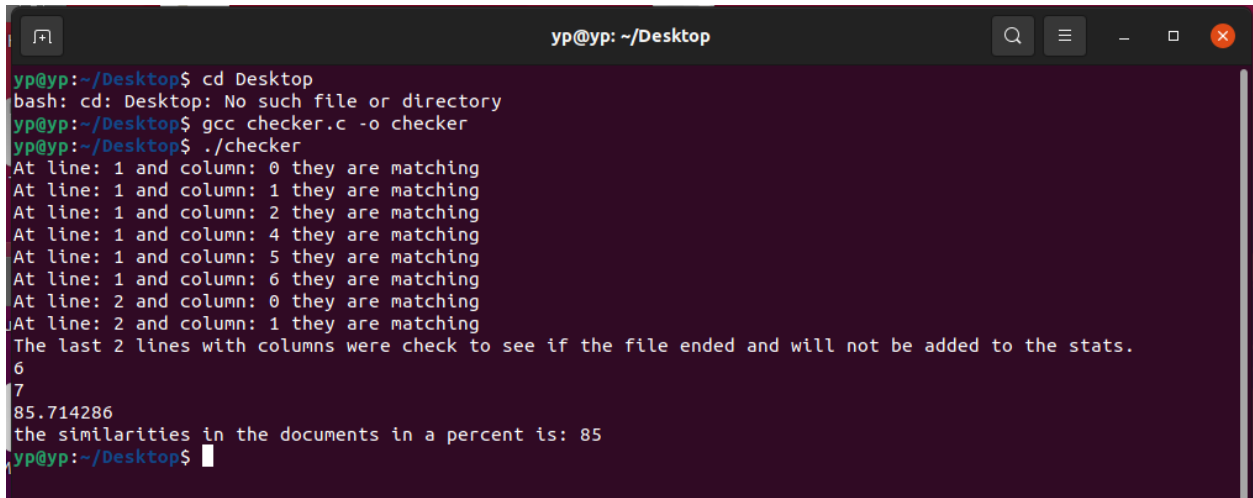
```



A screenshot of a text editor window titled "text.txt" with the path "~/Desktop". The window has a dark theme and a menu bar with "Open", a dropdown arrow, and a file icon. The main text area contains the line "1 Hi Bye." with a cursor at the end of the line. The status bar at the bottom shows "text.txt" and a close button.



A screenshot of a text editor window titled "text2.txt" with the path "~/Desktop". The window has a dark theme and a menu bar with "Open", a dropdown arrow, and a file icon. The main text area contains the line "1 Hi Hye." with a cursor at the end of the line. The status bar at the bottom shows "text2.txt" and a close button.



A screenshot of a terminal window titled "yp@yp: ~/Desktop". The terminal shows the following commands and output:

```
yp@yp:~/Desktop$ cd Desktop
bash: cd: Desktop: No such file or directory
yp@yp:~/Desktop$ gcc checker.c -o checker
yp@yp:~/Desktop$ ./checker
At line: 1 and column: 0 they are matching
At line: 1 and column: 1 they are matching
At line: 1 and column: 2 they are matching
At line: 1 and column: 4 they are matching
At line: 1 and column: 5 they are matching
At line: 1 and column: 6 they are matching
At line: 2 and column: 0 they are matching
At line: 2 and column: 1 they are matching
The last 2 lines with columns were check to see if the file ended and will not be added to the stats.
6
7
85.714286
the similarities in the documents in a percent is: 85
yp@yp:~/Desktop$
```

Question 2:

```

1 //usr/bin/perl
2
3 #initialize the variables that will be used throughout the code
4 $checker=0, $name, $firstName, $lastName;
5
6
7 print "Please enter a name either first, last, or any portion of the a person's name.\n";
8
9 #take input of user for the name they are looking for
10 $name = <>;
11 #removed last character to make sure just the name without a space is inputted
12 chop($name);
13 print "the name you have entered is " . $name;
14 print "\n";
15
16 #open phones directory file which includes all the recorded names with numbers, however, if the file cant open we send a message
17 open(DATA, "<->phones") or die "Couldn't open file.\n";
18
19 #cycle through the files information
20 while(DATA){
21     #make array to store the information
22     @phones = split(' ', $>);
23
24     #remove spaces
25     chop(@phones[0]);
26
27     #assign the first name and last name to a variable
28     $firstName = @phones[0];
29     $lastName = @phones[1];
30
31     #compare the variables without be case sensitive, also portions the name is allowed
32     if((uc $firstName) == (uc $name) or (uc $lastName) == (uc $name)){
33         #print the line where the information sits
34         print($_);
35         #checker variable is changed and will not do anything
36         $checker=1;
37         #break from while
38         last;
39     }
40 }
41
42 #if name is not found return name with a print saying not found
43 if($checker eq 0){
44     print($name, " NOT FOUND in the phone directory file!\n");
45 }
46
47
48 close(DATA);

```

```

1 |oscar, Yung 647-589-4343
2 Dan, Smith 647-123-4567

```

```

yp@yp: ~/Desktop
yp@yp:~/Desktop$ perl phone.pl
Please enter a name either first, last, or any portion of the a person's name.
Oscar
the name you have entered is Oscar
Oscar, Yung 647-589-4343
yp@yp:~/Desktop$ perl phone.pl
Please enter a name either first, last, or any portion of the a person's name.
osca
the name you have entered is osca
Oscar, Yung 647-589-4343
yp@yp:~/Desktop$ perl phone.pl
Please enter a name either first, last, or any portion of the a person's name.
Yung
the name you have entered is Yung
Oscar, Yung 647-589-4343
yp@yp:~/Desktop$

```