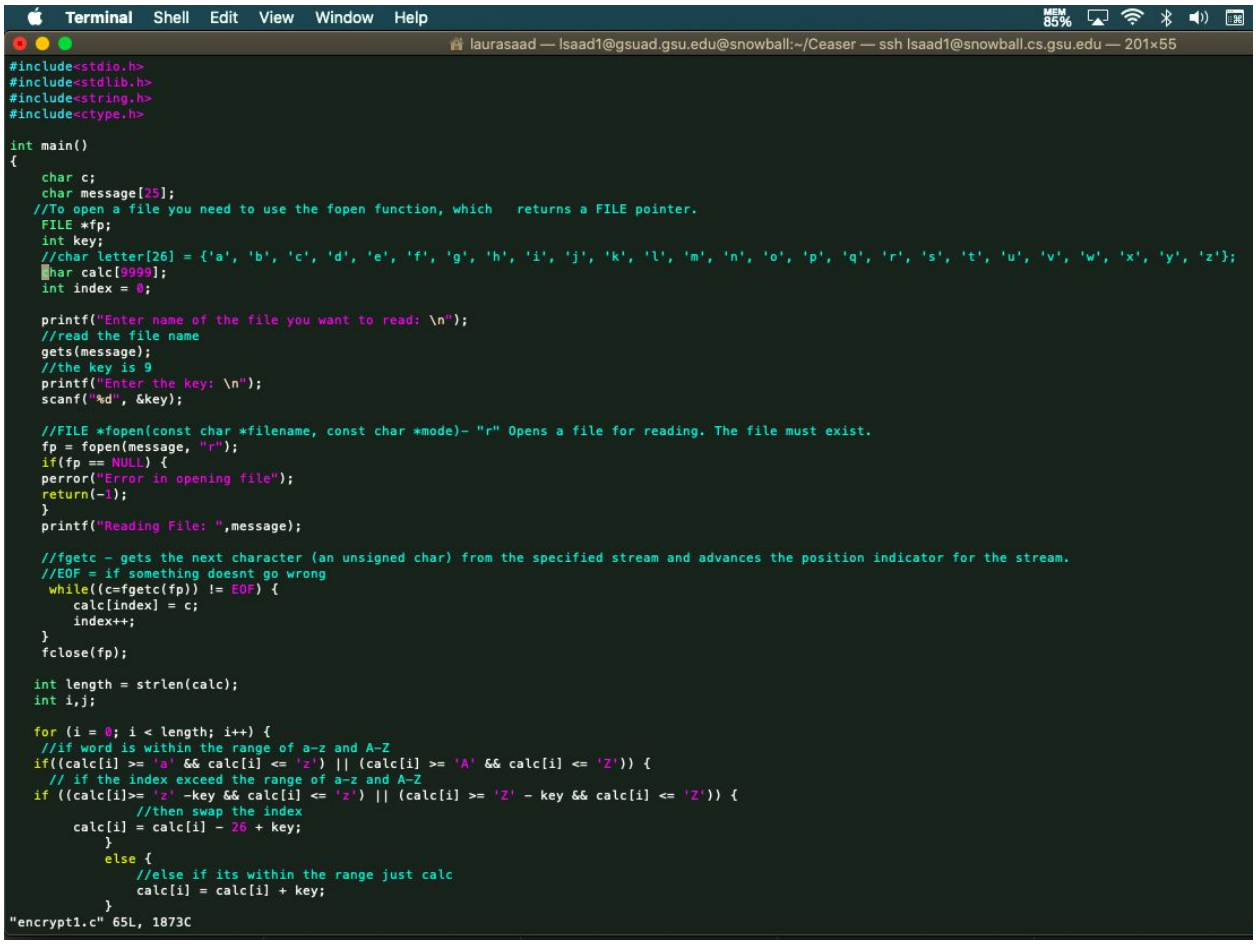
Q1: get the message

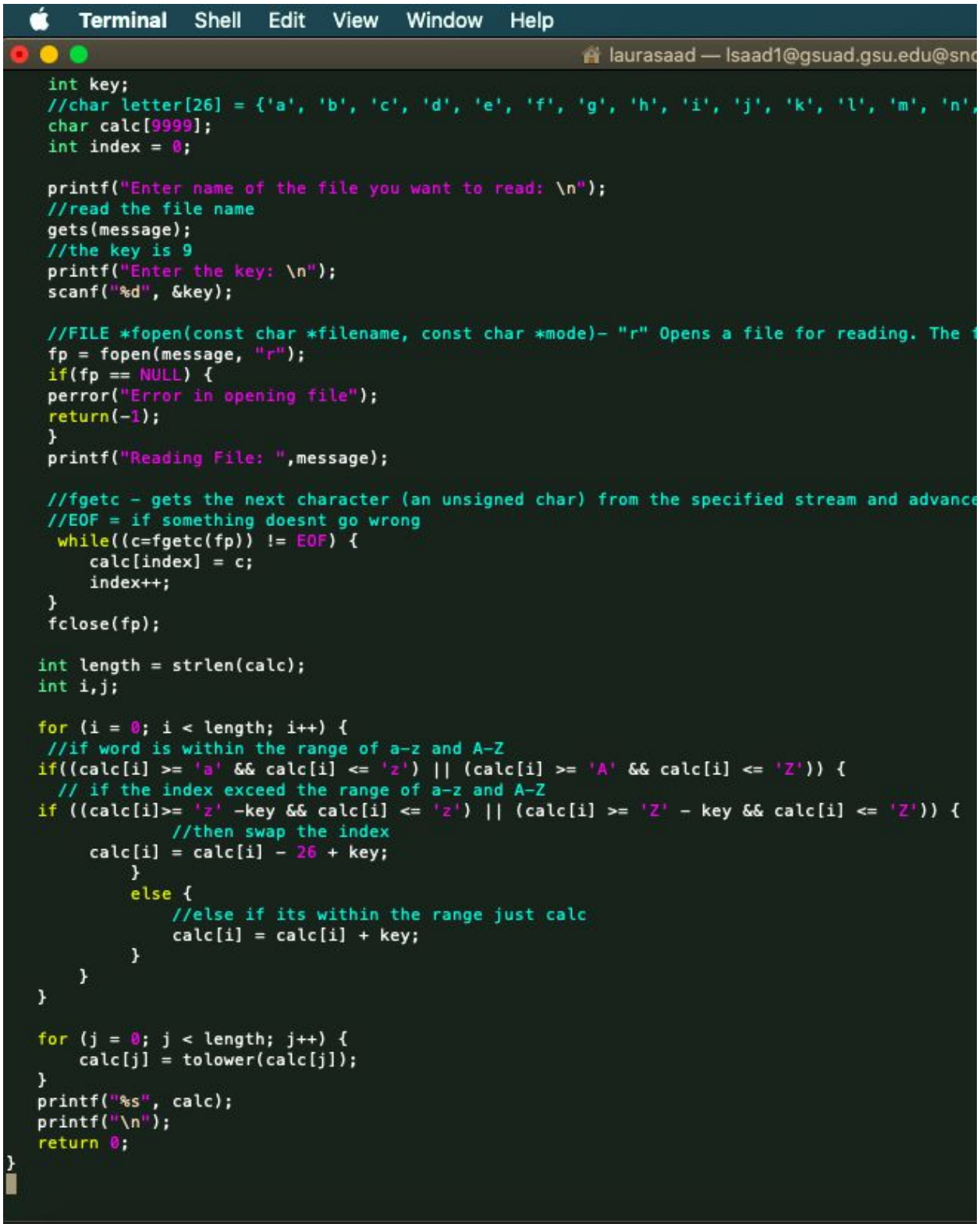
gcc -o encrypt1 encrypt.c

./encrypt1

message1.txt

Enter key : 9




Terminal Shell Edit View Window Help
laurasaad — lsaad1@gsuad.gsu.edu@snc
int key;
//char letter[26] = {'a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n',
char calc[9999];
int index = 0;
printf("Enter name of the file you want to read: \n");
//read the file name
gets(message);
//the key is 9
printf("Enter the key: \n");
scanf("%d", &key);
//FILE *fopen(const char *filename, const char *mode)- "r" Opens a file for reading. The f
fp = fopen(message, "r");
if(fp == NULL) {
perror("Error in opening file");
return(-1);
}
printf("Reading File: ",message);
//fgetc - gets the next character (an unsigned char) from the specified stream and advance
//EOF = if something doesnt go wrong
while((c=fgetc(fp)) != EOF) {
calc[index] = c;
index++;
}
fclose(fp);
int length = strlen(calc);
int i,j;
for (i = 0; i < length; i++) {
//if word is within the range of a-z and A-Z
if((calc[i] >= 'a' && calc[i] <= 'z') || (calc[i] >= 'A' && calc[i] <= 'Z')) {
// if the index exceed the range of a-z and A-Z
if ((calc[i]>= 'z' -key && calc[i] <= 'z') || (calc[i] >= 'Z' - key && calc[i] <= 'Z')) {
//then swap the index
calc[i] = calc[i] - 26 + key;
}
else {
//else if its within the range just calc
calc[i] = calc[i] + key;
}
}
}
for (j = 0; j < length; j++) {
calc[j] = tolower(calc[j]);
}
printf("%s", calc);
printf("\n");
return 0;
}

```
[[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ ./encrypt1
Enter name of the file you want to read:
[message1.txt
Enter the key:
9
Reading File: cqnan fjb j kxh jc xda blqxxu, fn dbnm cx ljuu qrv bjwmoxam jwm vnacxw.
qrb anju wjvn fjb bcreerwpb.  qn fjb cqn vxbc ngcajxamrwjah ujm r nena
ljvn jlaxbb.  r knurnen qn anjuuh urtnm bcdmh.  qn dbnm cx pnc rwcx jfodu
axfb oxa brccrwp dy rw knm jwm anjmrwp pannt; jwm jb oxa oanwlq raanpduja
enakb cqnan fjb brvyuh wx tnnyrwp qrv jfjh oaxv cqnv.  qn fjb oduu xo
fnram jwm dwwjcdaju wxcrxwb jkxdc knrwp j lanmrc cx qrb yjanwcb jwm jw
qxwxda cx cqn blqxxu; jwm qn hnjawnm cx frw yarinb, jwm paxf dy jwm kn j
lunena vjw, jwm qjm juu cqxbn bxacb xo fnjt-vrwmnm rmnjb.  r wnena twnf
bdlq j bcajwpn lanjcdan, hnc qjavunbb, vrwm hxd, jb cqn kjkn dwkxaw.

fnuu, cqjc kxh dbnm cx pnc ruu jkxdc cfrln j fnnt, bx cqjc qn lxdumw'c px
cx blqxxu.  cqnan wnena fjb bdlq j kxh cx pnc ruu jb cqjc bjwmoxam jwm
vnacxw.  ro cqnan fjb jwh twxfw mrbnjbn pxrwp frcqrw cnw vrunb xo qrv, qn
qjm rc, jwm qjm rc kjmuh.  qn fxdum cjtn kaxwlqrcrb rw cqn mxp-mjhb, jwm
qjen qjh-onena jc lqarbcvjb.  jocna j brg fnntb' ynarxm xo maxdpqc, qn
fxdum kn bcarltnw mxfw frcq aqndvjcrl onena; jwm qn fxdum px xdc rw j
wxenvkna oxp jwm lxvn qxvn frcq j bdwbcaxtn.

cqnh ydc qrv dwmna ujdpqrwp-pjb xwn hnja, yxxa ujm, jwm manf juu qrb
cnncq, jwm pjen qrv j ojubn bnc, knljdbn qn bdoonanm bx cnaarkuh frcq
cxxcqjlqn; jwm cqnw rc cdawnm cx wndajuprj jwm nja-jlqn.  qn fjb wnena
frcqxdc j lxum, nglnyc xwln oxa wrwn fnntb fqrun qn qjm bljaunc onena;
jwm qn jufjhb qjm lqrukujrwb.  mdarwp cqn panjc lqxunaj bljan xo 1871,
xda wnrpqkxdaqxxm fjb brwpdujauh oann oaxv rc.  cqnan fjb xwuh xwn
anydcnm ljbn rw cqn fqxun yjarbq: cqjc ljbn fjb hxdwp bcreerwpb.

qn qjm cx bcxy rw knm fqnw qn fjb ruu, jwm njc lqrltnw jwm ldbcjamb jwm
qxc-qxdbn pajynb; jwm qn fxdum urn cqnan jwm bxk, knljdbn cqnh fxdumw'c
unc qrv mx ujcrw ngnalrbnb, jwm cxxt qrb pnavjw pajvvja jfjh oaxv qrv.

jwm fn xcqna kxhb, fqx fxdum qjen bjlarorlnm cnw cnavb xo xda blqxxu-uron
oxa cqn bjtn xo knrwp ruu oxa j mjh, jwm qjm wx mnbran fqjcnena cx pren
xda yjanwcb jwh ngldbn oxa knrwp bcdlt-dy jkxdc db, lxdumw'c ljclq bx
vdlq jb j bcroo wnlt.  fn oxxunm jkxdc rw majdpqcb, jwm rc mrm db pxxm,
jwm oanbqnwnm db dy; jwm fn cxxt cqrwpb cx vjtn db brlt, jwm cqnh vjmn db
ojc, jwm pjen db jw jyyncrcn.  wxcqrwp fn lxdum cqrwt xo bnnvnm cx vjtn
db ruu dwcru cqn qxurmjhb knpjw.  cqnw, xw cqn kanjtrwp-dy mjh, fn ljdpqc
lxumb, jwm fqxxyrwp lxdpq, jwm juu trwmb xo mrbxamnab, fqrlq ujbcnm cruu
cqn cnav anlxvvnwlnm; fqnw, rw byrcn xo nenahcqrwp fn lxdum vjwxndean cx
cqn lxwcajah, fn fxdum pnc bdmmnwuh fnuu jpjrw, jwm kn knccna cqjw nena.

bdlq rb uron; jwm fn jan kdc jb pajbb cqjc rb ldc mxfw, jwm ydc rwcx cqn
xenw jwm kjtnm.


[[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ vi encrypt1.c
```

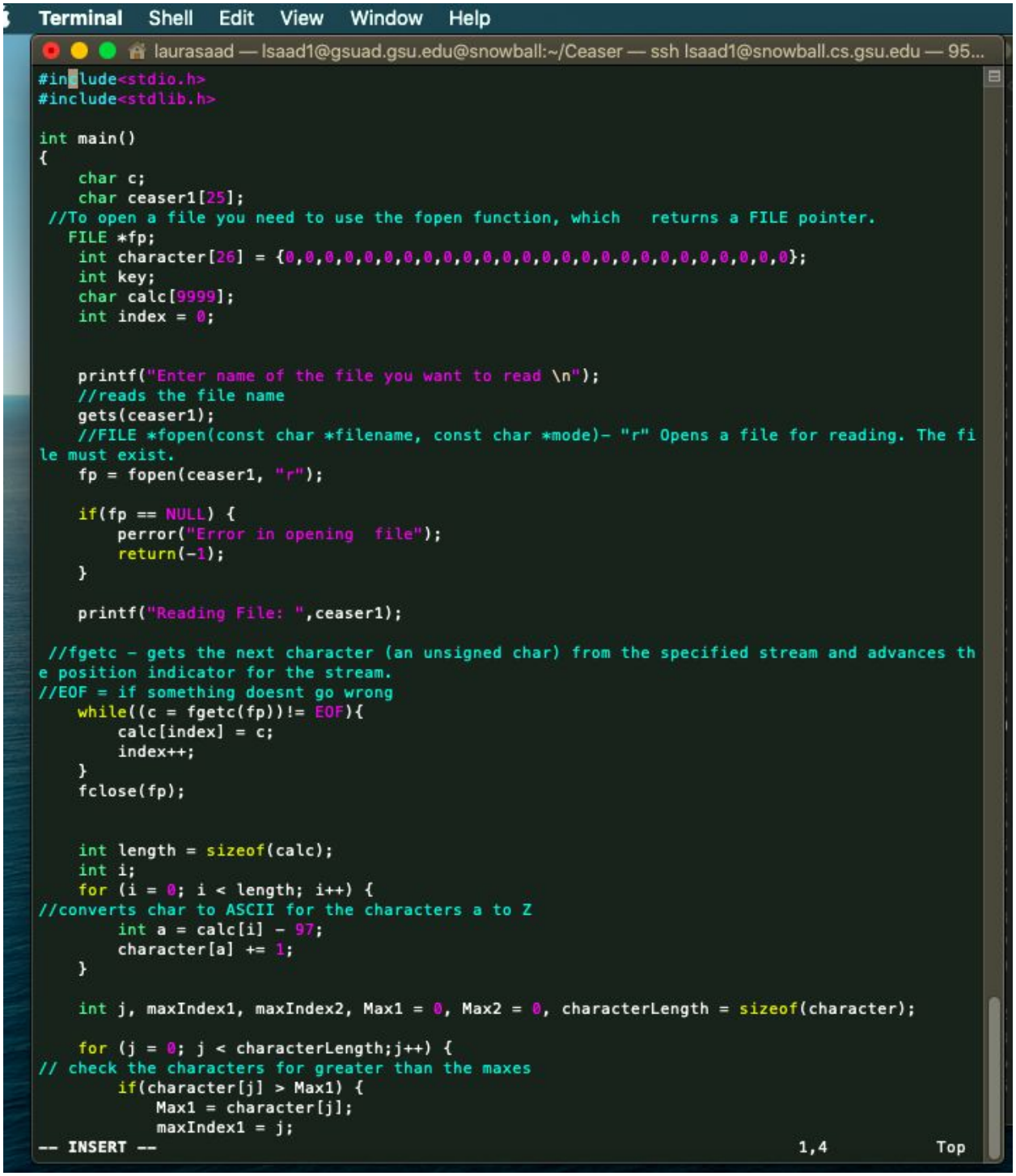
2.

gcc -o encrypt2 encrypt2.c

./encrypt2

Ceaser1.txt

Key:


Terminal Shell Edit View Window Help
laurasaad — lsaad1@gsuad.gsu.edu@snowball:~/Ceaser — ssh lsaad1@snowball.cs.gsu.edu — 95...
#include<stdio.h>
#include<stdlib.h>
int main()
{
char c;
char ceaser1[25];
//To open a file you need to use the fopen function, which returns a FILE pointer.
FILE *fp;
int character[26] = {0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0};
int key;
char calc[9999];
int index = 0;
printf("Enter name of the file you want to read \n");
//reads the file name
gets(ceaser1);
//FILE *fopen(const char *filename, const char *mode)- "r" Opens a file for reading. The file must exist.
fp = fopen(ceaser1, "r");
if(fp == NULL) {
perror("Error in opening file");
return(-1);
}
printf("Reading File: ",ceaser1);
//fgetc - gets the next character (an unsigned char) from the specified stream and advances the position indicator for the stream.
//EOF = if something doesnt go wrong
while((c = fgetc(fp))!= EOF){
calc[index] = c;
index++;
}
fclose(fp);
int length = sizeof(calc);
int i;
for (i = 0; i < length; i++) {
//converts char to ASCII for the characters a to Z
int a = calc[i] - 97;
character[a] += 1;
}
int j, maxIndex1, maxIndex2, Max1 = 0, Max2 = 0, characterLength = sizeof(character);
for (j = 0; j < characterLength;j++) {
// check the characters for greater than the maxes
if(character[j] > Max1) {
Max1 = character[j];
maxIndex1 = j;
-- INSERT -- 1,4 Top

```
    int length = sizeof(calc);
    int i;
    for (i = 0; i < length; i++) {
//converts char to ASCII for the characters a to Z
        int a = calc[i] - 97;
        character[a] += 1;
    }

    int j, maxIndex1, maxIndex2, Max1 = 0, Max2 = 0, characterLength = sizeof(character);

    for (j = 0; j < characterLength;j++) {
// check the characters for greater than the maxes
        if(character[j] > Max1) {
            Max1 = character[j];
            maxIndex1 = j;
        }
        else if(character[j] < Max1 && character[j] > Max2) {
            Max2 = character[j];
            maxIndex2 = j;
        }
    }
        //key = the maxIndex and -4 the letter 'e' which is 4 spaces away from a
    key = maxIndex1 - 4;
    key = maxIndex2 - 19;
        //if the key is less than 'e' so a,b,c,d
    if (key < 0) {
        key += 26;
    }
    printf("The key is: %d\n", key);
    return 0;
}
-- INSERT --                                                    68,2          Bot
```

```
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ ./encrypt2
Enter name of the file you want to read
ceaser1.txt
Reading File: The key is: 51
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ vi encrypt2.c
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$
```

3.

gcc -o encrypt3 encrypt3.c

./encrypt3

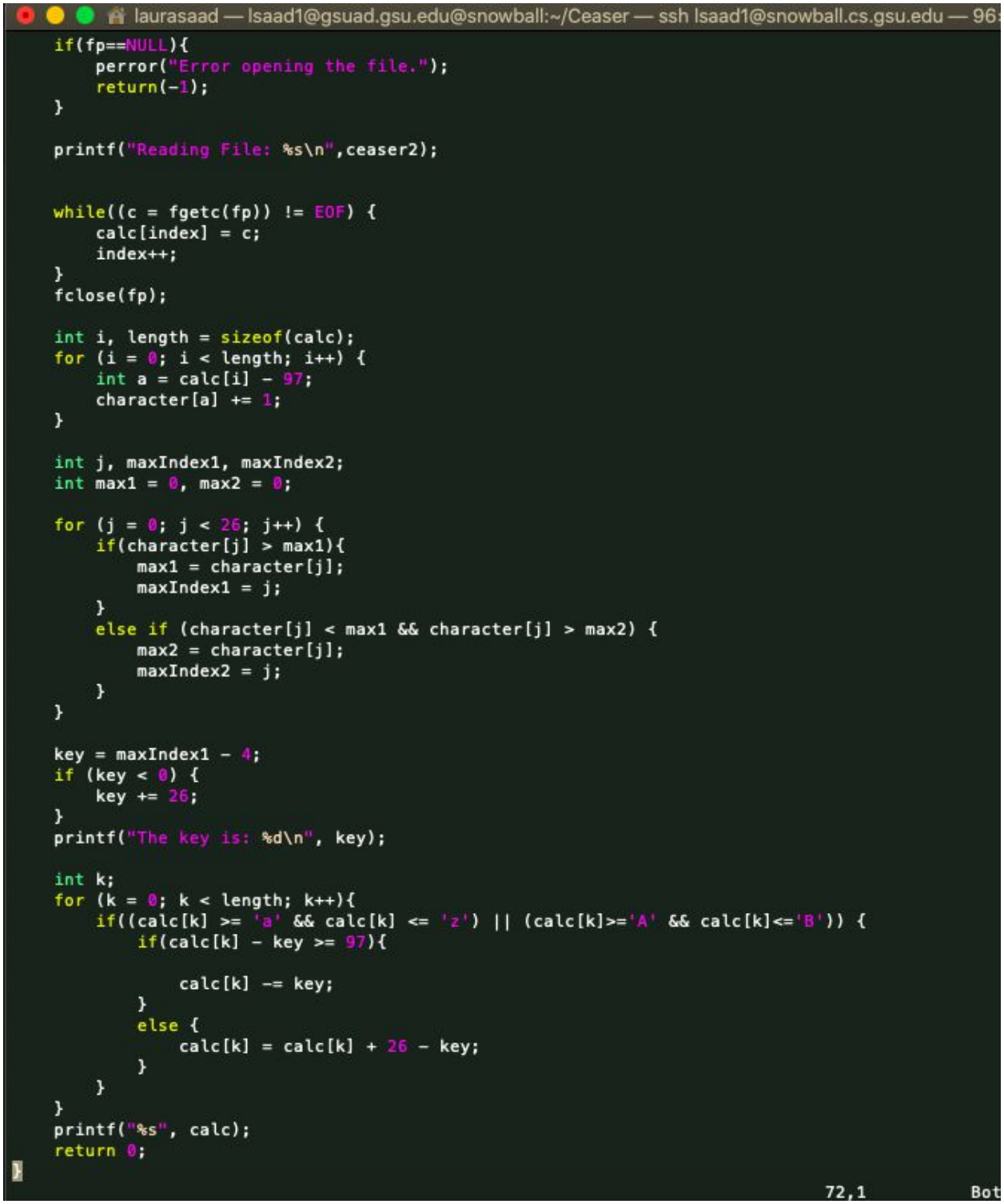
Ceaser2.txt

Terminal Shell Edit View Window Help

laurasaad — lsaad1@gsuad.gsu.edu@snowball:~/Ceaser — ssh lsaad1@snowball.cs.gsu.edu — 96×...

```c
#include<stdio.h>
#include<stdlib.h>

int main()
{
    char c;
    char ceaser2[51];
    FILE *fp;
    int key;
    int character[26] = {0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0};
    char calc[9999];
    int index = 0;

    printf("Enter name of the file you want  to read \n");
    gets(ceaser2);
    fp = fopen(ceaser2, "r");

    if(fp==NULL){
        perror("Error opening the file.");
        return(-1);
    }

    printf("Reading File: %s\n",ceaser2);


    while((c = fgetc(fp)) != EOF) {
        calc[index] = c;
        index++;
    }
    fclose(fp);

    int i, length = sizeof(calc);
    for (i = 0; i < length; i++) {
        int a = calc[i] - 97;
        character[a] += 1;
    }

    int j, maxIndex1, maxIndex2;
    int max1 = 0, max2 = 0;

    for (j = 0; j < 26; j++) {
        if(character[j] > max1){
            max1 = character[j];
            maxIndex1 = j;
        }
        else if (character[j] < max1 && character[j] > max2) {
            max2 = character[j];
            maxIndex2 = j;
        }
    }

    key = maxIndex1 - 4;
    if (key < 0) {
        key += 26;
    }
```

1,17 Top


laurasaad — lsaad1@gsuad.gsu.edu@snowball:~/Ceaser — ssh lsaad1@snowball.cs.gsu.edu — 96
if(fp==NULL){
perror("Error opening the file.");
return(-1);
}
printf("Reading File: %s\n",ceaser2);
while((c = fgetc(fp)) != EOF) {
calc[index] = c;
index++;
}
fclose(fp);
int i, length = sizeof(calc);
for (i = 0; i < length; i++) {
int a = calc[i] - 97;
character[a] += 1;
}
int j, maxIndex1, maxIndex2;
int max1 = 0, max2 = 0;
for (j = 0; j < 26; j++) {
if(character[j] > max1){
max1 = character[j];
maxIndex1 = j;
}
else if (character[j] < max1 && character[j] > max2) {
max2 = character[j];
maxIndex2 = j;
}
}
key = maxIndex1 - 4;
if (key < 0) {
key += 26;
}
printf("The key is: %d\n", key);
int k;
for (k = 0; k < length; k++){
if((calc[k] >= 'a' && calc[k] <= 'z') || (calc[k]>='A' && calc[k]<='B')) {
if(calc[k] - key >= 97){
calc[k] -= key;
}
else {
calc[k] = calc[k] + 26 - key;
}
}
}
printf("%s", calc);
return 0;
}
72,1
Bot

```
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ gcc -o encrypt3  encrypt3.c
encrypt3.c: In function ‘main’:
encrypt3.c:15:5: warning: ‘gets’ is deprecated (declared at /usr/include/stdio.h:638) [-Wdeprecated-declarations]
     gets(ceaser2);
     ^
/tmp/cchb7Z9H.o: In function `main':
encrypt3.c:(.text+0x3e): warning: the `gets' function is dangerous and should not be used.
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ ./encrypt3
Enter name of the file you want  to read
ceaser2.txt
Reading File: ceaser2.txt
The key is: 6
"no," said harris, "if you want rest and change, you can't beat a sea
trip."

i objected to the sea trip strongly.  a sea trip does you good when you
are going to have a couple of months of it, but, for a week, it is
wicked.

you start on monday with the idea implanted in your bosom that you are
going to enjoy yourself.  you wave an airy adieu to the boys on shore,
light your biggest pipe, and swagger about the deck as if you were
captain cook, sir francis drake, and christopher columbus all rolled into
one.  on tuesday, you wish you hadn't come.  on wednesday, thursday, and
friday, you wish you were dead.  on saturday, you are able to swallow a
little beef tea, and to sit up on deck, and answer with a wan, sweet
smile when kindhearted people ask you how you feel now.  on sunday, you
begin to walk about again, and take solid food.  and on monday morning,
as, with your bag and umbrella in your hand, you stand by the gunwale,
waiting to step ashore, you begin to thoroughly like it.

i remember my brotherinlaw going for a short sea trip once, for the
benefit of his health.  he took a return berth from london to liverpool;
and when he got to liverpool, the only thing he was anxious about was to
sell that return ticket.

it was offered round the town at a tremendous reduction, so i am told;
and was eventually sold for eighteenpence to a biliouslooking youth who
had just been advised by his medical men to go to the seaside, and take
exercise.

"seaside!" said my brotherinlaw, pressing the ticket affectionately
into his hand; "why, you'll have enough to last you a lifetime; and as
for exercise! why, you'll get more exercise, sitting down on that ship,
than you would turning somersaults on dry land."

he himself  my brotherinlaw  came back by train.  he said the north
western railway was healthy enough for him.
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$ vi encrypt3.c
[lsaad1@gsuad.gsu.edu@snowball Ceaser]$
```