The project “C Programming” is the implementation of theoretical and practical knowledge of C. As this is our first project work which is made using MS-WORD, CODE BLOCK tools and also using our own theoretical knowledge which we gained from the practice of class XI and XII.

This project is made to obtain the information of “BASIC C PROGRAMS”. This project lets us know syntactical and compiling process of C language. Thus using this project we can save our time and effort. Doing this project we came to know about the difference in structured programming and web programming. C language carries a wide scope on our future level as well. C program is a compilation based programming approach in which a whole program is checked for an error rather than a line at a time.

INTRODUCTION

We have developed this project work by using one of the most successful programming language that is C Programming. It is essential tool to develop any program. We have also tried to design 10 small programs where we have used this C syntax and its elements.

Our project includes many features of C . We have used structure, arrays, characters, string elements in it which was based on our theory syllabus. This projects tends to sharpen our programming, logical and technical aspects. Compilation, object file generation and other constituents of a C program was experienced.

ACKNOWELEDGEMT

This project is specially designed for finding the information of the people processing with the advanced computer technology. The project assigned for the partial fulfillment of computer science for GRADEXII. In many school and colleges, inspite of advance computer technology, they lag behind in fair result processing. The project assigned was to solve the current problem of various academic institutions. We know that to complete this project successfully different people have provide us great help. We would like to express our grateful to all of them who have provided direct and indirect help to complete this project.

We greatly thankful to our principal Mr. Khilaraj Koirala who helped us by providing us the essential resources for the project. We like to express our respect for computer science teacher Mr.Uma Shankar Karn for his keen support and supervision to complete this project successfully.

We are grateful to our college for their important suggestion and help. We are thankful to our college management to provide us great support during this project.

OBJECTIVE

After completion of this project work, we will be able to:

- Know about the basic structure of C document.
- To define variables, arrays, structure and constants.
- Learn about the concept of presentation of any C document in a systematic manner.
- Differentiate interpreter with compiler.
- Know about the various text editors and compilers associated with C language.
- Use of C language in basic and advanced form of programming.
- Enhance our programmers debugging skills and error rectification.
- Differentiate run time and compile error.

IMPORTANCE

- To make the reader understand the value &effect of C in today's world.
- To help the future IT workers to enhance their knowledge related to C.
- This project work is a step ahead for computer student to enhance their basic knowledge about C program& its concept.
- To let the reader get the central idea of C programming in the simplest form.
- To give the direction to the upcoming C program user for safe C programming.
- This project is very important for the completion of computer education for the student interested in computer field.
- C program has a wide range of simplest to complex set of programming approach making us more curious.

TABLE OF CONTENTS

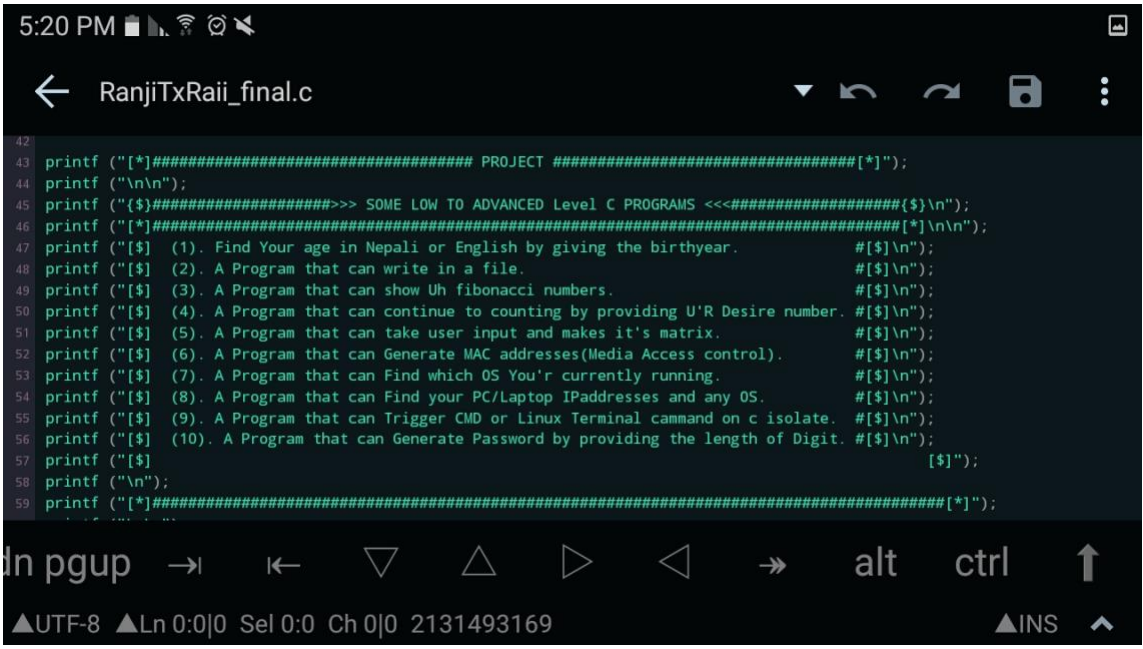
SOURCE CODE (SCRIPTS OR PROGRAMS)

```
/* Project work By Ranjit Rai

to Uma sir

*/

#include<stdio.h>

#include<stdlib.h>

#include<time.h>

#include<string.h>

#include<math.h>

#include<unistd.h>

#include<sys/types.h>

#include<sys/socket.h>

#include<sys/ioctl.h>

#include<netinet/in.h>

#include<net/if.h>

#include<arpa/inet.h>

void main()

{

int project,x=0,close=0,mac,Rai,winAndlinux,len;

char address[]={"eth0"};

char ipaddr[]="wlan0";
```

```
char Alphabets[]="ABCDEFGHIJKLMNOPQRSTUVWXYZ";

char alphabets[]="abcdefghijklmnopqrstuvwxyz";

char numbers[]  ="0123456789";

char symbols[]  ="+×÷=%_!@#$/&*()-':;,";

char passwd[25];

char msg []="Hello Pretty Stranger.Your pretty Ugly to.😂😂";

FILE *fp;

int b=1,c,a=0,i=0,j,t;

int t1 = 0, t2 = 1, nextTerm = 0;//n;

int n,count;

#define MAXROW 10

#define MAXCOL 10

int matrix[MAXROW][MAXCOL];


struct ifreq ifr;


runner:

if (x<=10)


printf ("[*]##################################### PROJECT
###################################[*]");

printf ("\n\n");

printf ("{$}####################>>> SOME LOW TO ADVANCED Level C PROGRAMS
<<<####################{$}\n");

printf
("[*]##########################################################################################
###[*]\n\n");

printf ("[$]  (1). Find Your age in Nepali or English by giving the birthyear.          #[$]\n");

printf ("[$]  (2). A Program that can write in a file.                                 #[$]\n");

printf ("[$]  (3). A Program that can show Uh fibonacci numbers.                      #[$]\n");
```

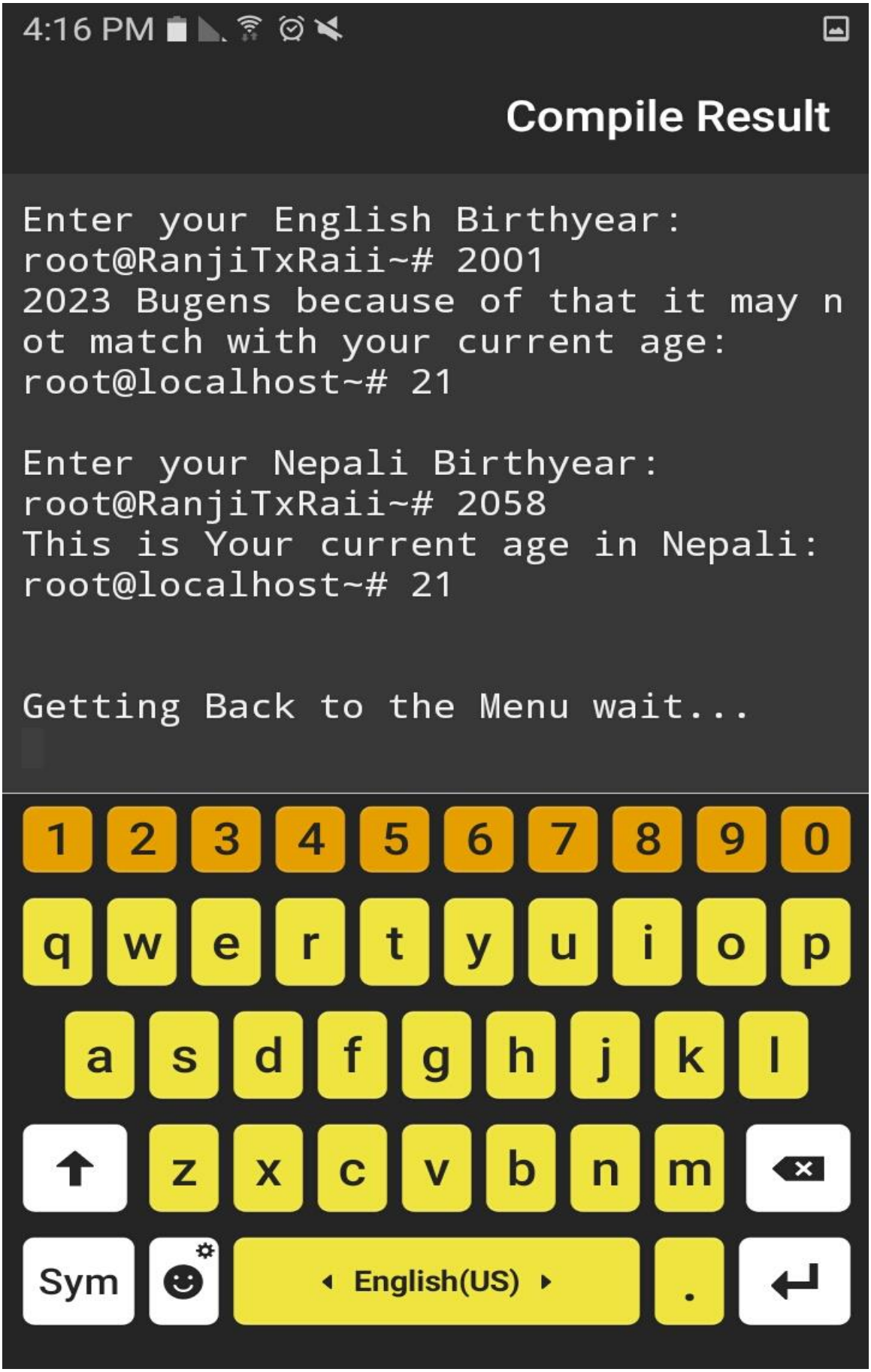
```
printf ("[$]  (4). A Program that can continue to counting by providing U'R Desire number. #[$]\n");

printf ("[$]  (5). A Program that can take user input and makes it's matrix.            #[$]\n");

printf ("[$]  (6). A Program that can Generate MAC addresses(Media Access control).      #[$]\n");

printf ("[$]  (7). A Program that can Find which OS You'r currently running.            #[$]\n");

printf ("[$]  (8). A Program that can Find your PC/Laptop IPaddresses and any OS.       #[$]\n");

printf ("[$]  (9). A Program that can Trigger CMD or Linux Terminal cammand on c isolate.  #[$]\n");

printf ("[$]  (10). A Program that can Generate Password by providing the length of Digit. #[$]\n");

printf ("[$]                                                          [$]");

printf ("\n");

printf
("[*]#########################################################################################
########[*]");

printf ("\n\n");

//starting

printf ("::::These are the list of Program You can run:::::::::\n\nroot@localhost~# ");

printf("For Exiting type ☞[close] or 0\n");

scanf ("%d",&project);

  switch (project)
```

OUTPUT:



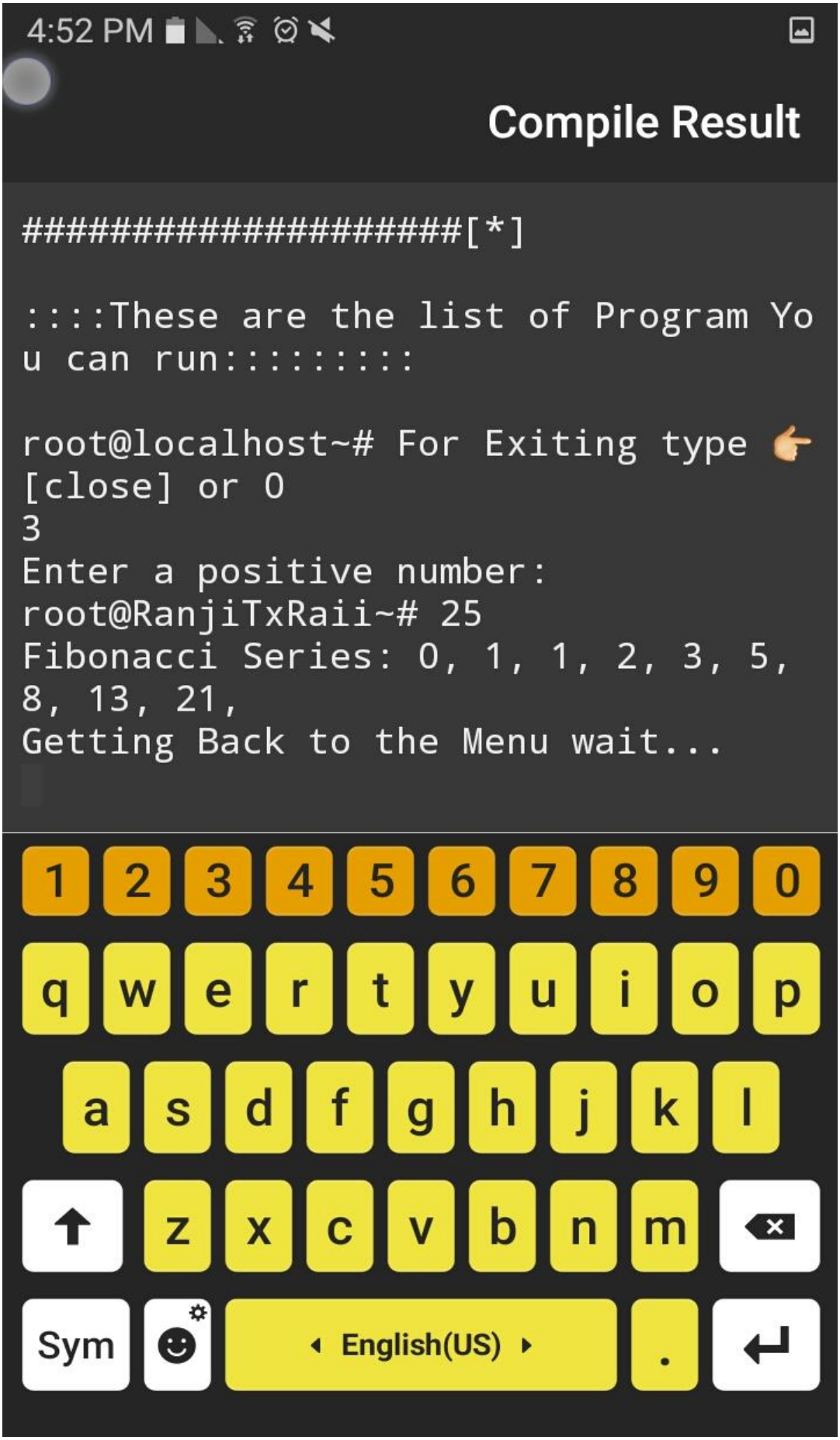
```
{
case 1:
printf ("Enter your English Birthyear:\nroot@RanjiTxRaii~# ");int a;
scanf ("%d",&a);
int age=2022-a;
printf ("2023 Bugens because of that it may not match with your current age:\nroot@localhost~#
%d",age);
printf ("\n\n");
printf ("Enter your Nepali Birthyear:\nroot@RanjiTxRaii~# ");int b;
scanf ("%d",&b);
int age2=2079-b;
printf ("This is Your current age in Nepali:\nroot@localhost~# %d",age2);printf("\n\n");
printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep (4);
goto runner;
```

OUTPUT:


4:16 PM
Compile Result
Enter your English Birthyear:
root@RanjiTxRaii~# 2001
2023 Bugens because of that it may n
ot match with your current age:
root@localhost~# 21
Enter your Nepali Birthyear:
root@RanjiTxRaii~# 2058
This is Your current age in Nepali:
root@localhost~# 21
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)

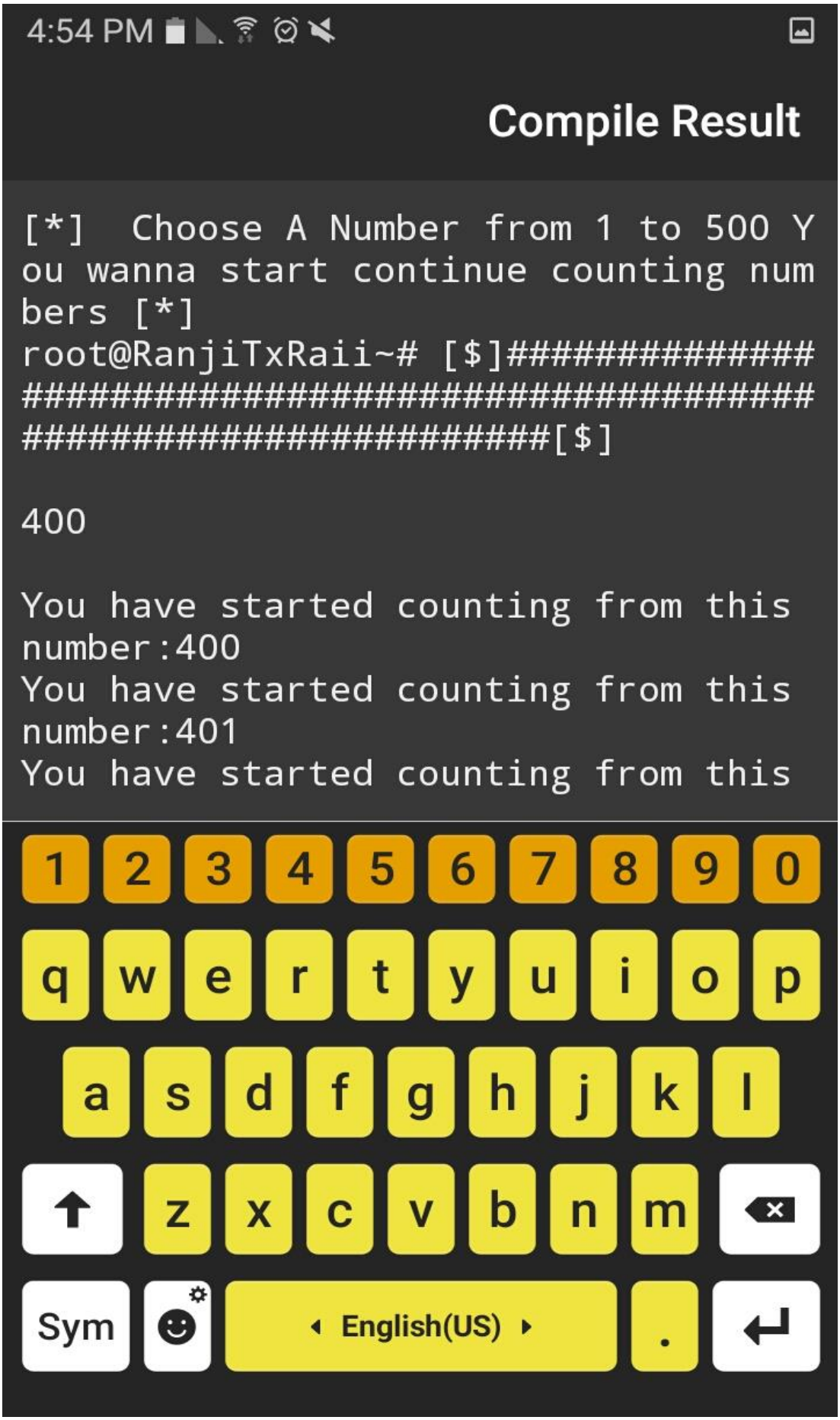
```
case 2:
//char msg[200];
printf("Enter the message:\nroot@RanjiTxRaii~# ");
scanf ("%[^\n]",msg);{
/*fp=fopen("C:\\msg.txt","w+r");*/
fp=fopen("/sdcard/Message.txt","w+r");
fputs(msg,fp);
fclose(fp);}

    printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep(4);
goto runner;
```

OUTPUT:


4:52 PM
Compile Result
####################[*]
::::These are the list of Program You can run:::::::::
root@localhost~# For Exiting type 👉 [close] or 0
3
Enter a positive number:
root@RanjiTxRaii~# 25
Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13, 21,
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

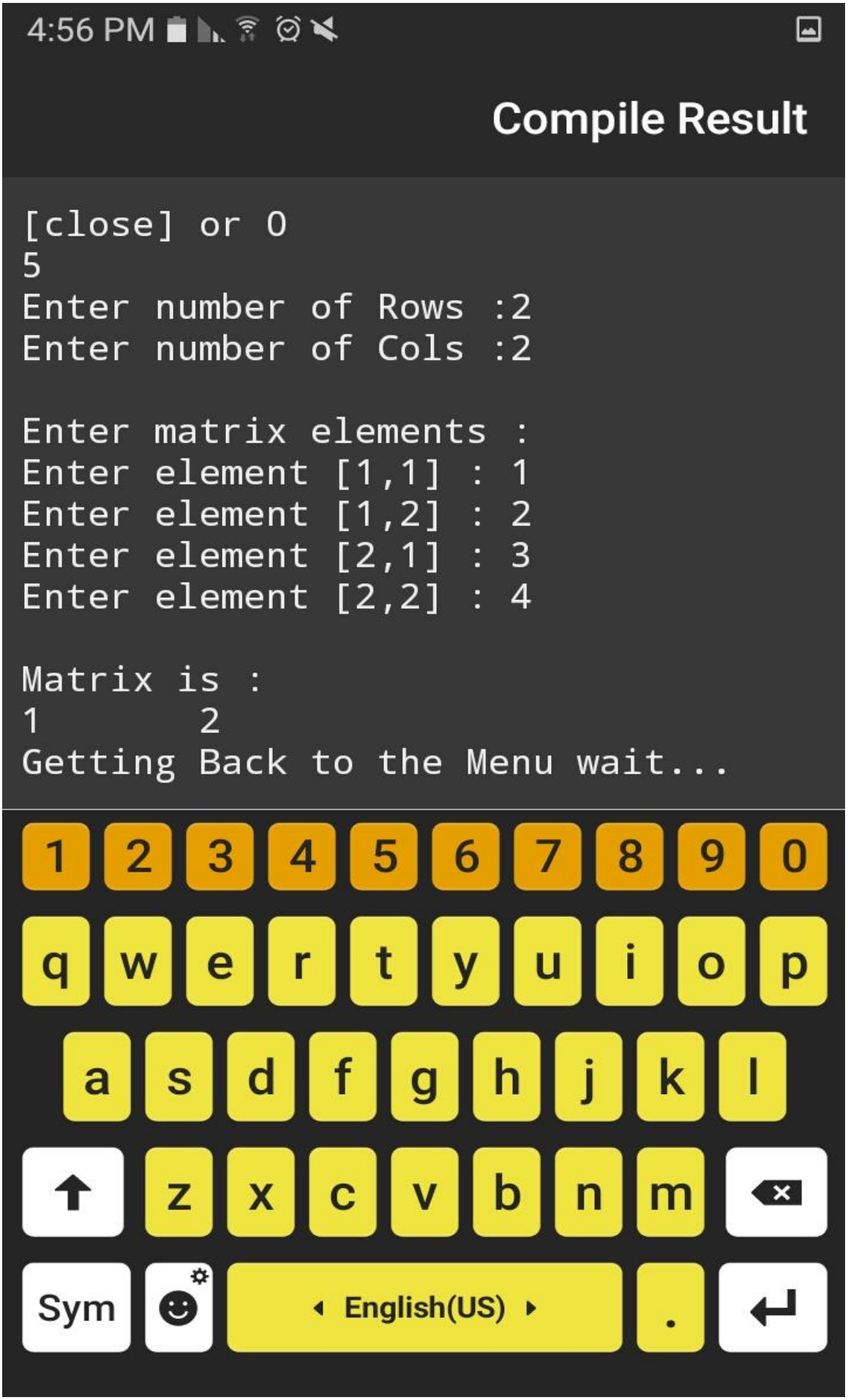
```
case 4:

printf("[$]########################## Developed by RanjiTxRai ##########################[$]\n");

printf("[*]  Choose A Number from 1 to 500 You wanna start continue counting numbers
[*]\nroot@RanjiTxRaii~# ");

printf("[$]#################################################################################[$]
\n\n");

scanf("%d",&count);do{

if(count == 501){

    count++;

    continue;}

   printf(" \nYou have started counting from this number:%d",count);

   count++;

   }while (count < 501);


printf("\n");

printf("Getting Back to the Menu wait...");

printf("\n");

sleep(10);

goto runner;
```

OUTPUT:


4:54 PM
Compile Result
[*] Choose A Number from 1 to 500 You wanna start continue counting numbers [*]
root@RanjiTxRaii~# [$]##[$]
400
You have started counting from this number:400
You have started counting from this number:401
You have started counting from this
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

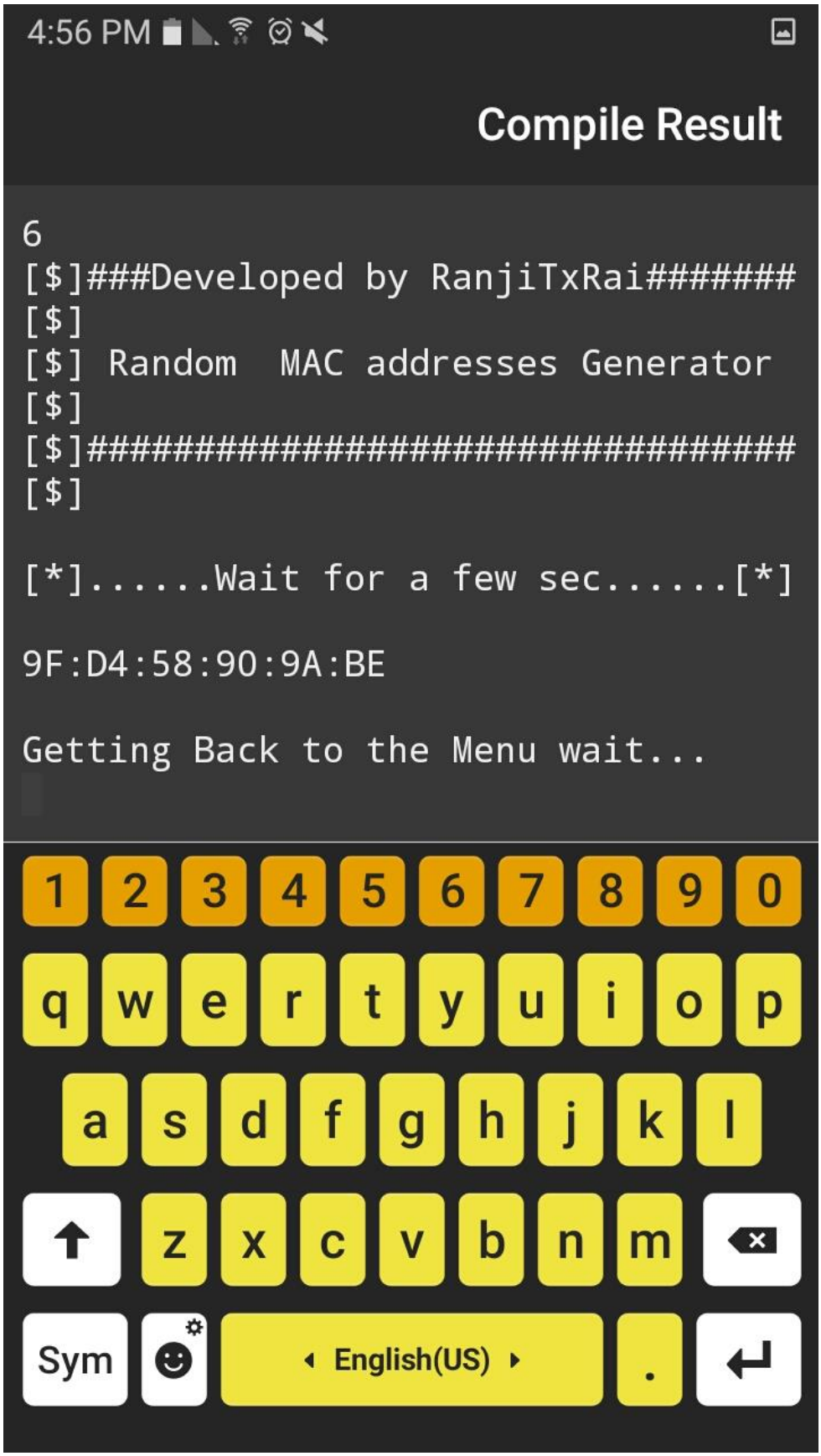
```
case 5:

    printf("Enter number of Rows :");
   scanf("%d",&t);
   printf("Enter number of Cols :");
   scanf("%d",&c);

   printf("\nEnter matrix elements :\n");
   for(i=0;i< t;i++)
   {
      for(j=0;j< c;j++)
      {
         printf("Enter element [%d,%d] : ",i+1,j+1);
         scanf("%d",&matrix[i][j]);
      }
   }

   printf("\nMatrix is :\n");
   for(i=0;i< t;i++)
   {
      for(j=0;j< c;j++)
      {
         printf("%d\t",matrix[i][j]);
      }

  printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep(4);goto runner;}    sleep (4);
```

OUTPUT :


4:56 PM
Compile Result
[close] or 0
5
Enter number of Rows :2
Enter number of Cols :2
Enter matrix elements :
Enter element [1,1] : 1
Enter element [1,2] : 2
Enter element [2,1] : 3
Enter element [2,2] : 4
Matrix is :
1 2
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)

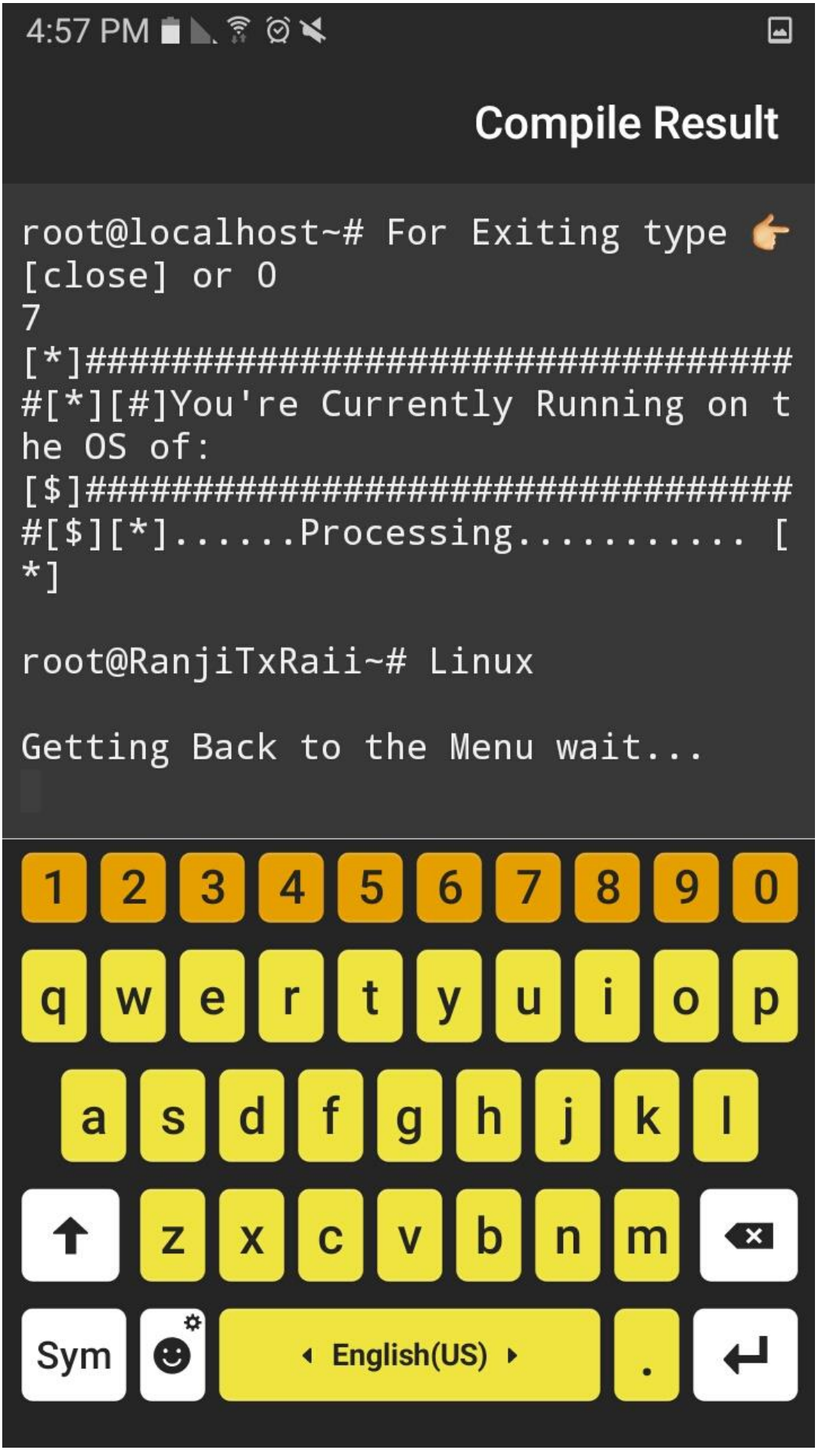
```
case 6:


printf("[$]###Developed by RanjiTxRai#######[$]\n");
printf("[$] Random  MAC addresses Generator [$]\n");
printf("[$]####################################[$]\n");
printf("\n");
printf("[*].....Wait for a few sec.....[*]");
printf("\n\n");
sleep (5);
srand(time(NULL) + getpid());
for (mac = 0; mac < 6; mac++)
{ Rai = rand() % 256;
   printf("%s%X%s", Rai < 16 ? "0" : "", Rai, mac < 5 ? ":" : "\n");
    }


  printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep(7);
goto runner;
```

OUTPUT:


4:56 PM
Compile Result
6
[$]###Developed by RanjiTxRai#######
[$]
[$] Random MAC addresses Generator
[$]
[$]#####################################
[$]
[*]......Wait for a few sec......[*]
9F:D4:58:90:9A:BE
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

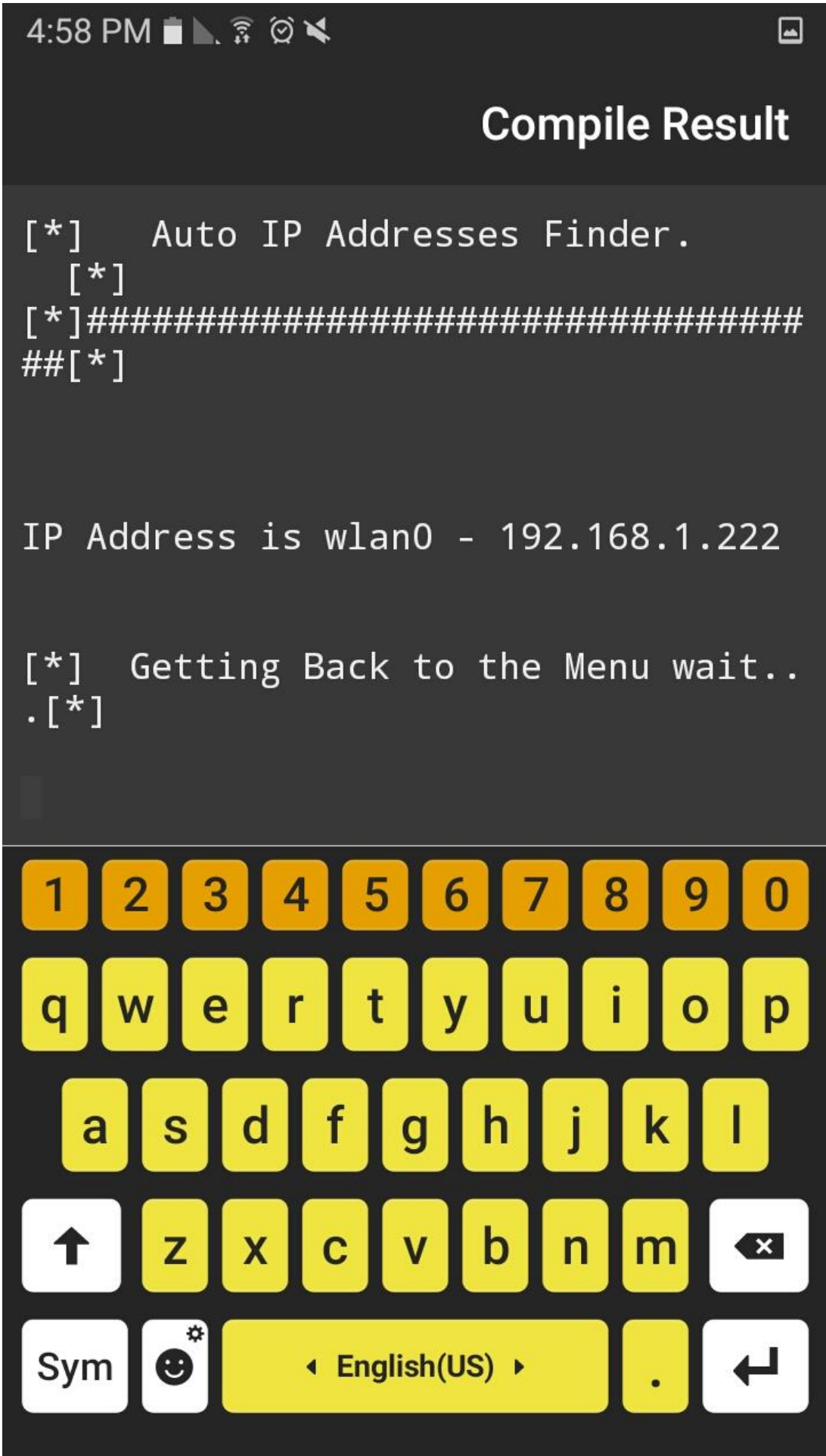
```
case 7:
printf("[*]###################################[*]");
printf("[#]You're Currently Running on the OS of:\n");
printf("[$]###################################[$]");
printf("[*].....Processing..... [*]\n\n");

sleep (5);
        #ifdef _WIN32
printf("root@RanjiTxRaii~# Windows With Architecture of 32bit\n");

#elif _WIN64
printf("root@RanjiTxRaii~# Windows With Architecture of 64bit\n");
        #elif __linux__
printf("root@RanjiTxRaii~# Linux\n");
#elif __unix__
printf("root@RanjiTxRaii~# Other unix OS\n");
#elif    __ANDROID__
printf("root@RanjiTxRaii~# Android OS\n");
#elif TARGET_OS_IPHONE
printf("root@RanjiTxRaii~# IPhones OS\n");
#elif TARGET_OS_MAC
printf("root@RanjiTxRaii~# MacOS \n");
#else
printf("root@RanjiTxRaii~# Unidentified OS\n");
#endif; printf("\n");
printf("Getting Back to the Menu wait...");printf("\n");
sleep (4);goto runner;
```

OUTPUT:


4:57 PM
Compile Result
root@localhost~# For Exiting type 👉
[close] or 0
7
[*]##################################
#[*][#]You're Currently Running on t
he OS of:
[$]##################################
#[$][*]......Processing.......... [
*]
root@RanjiTxRaii~# Linux
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

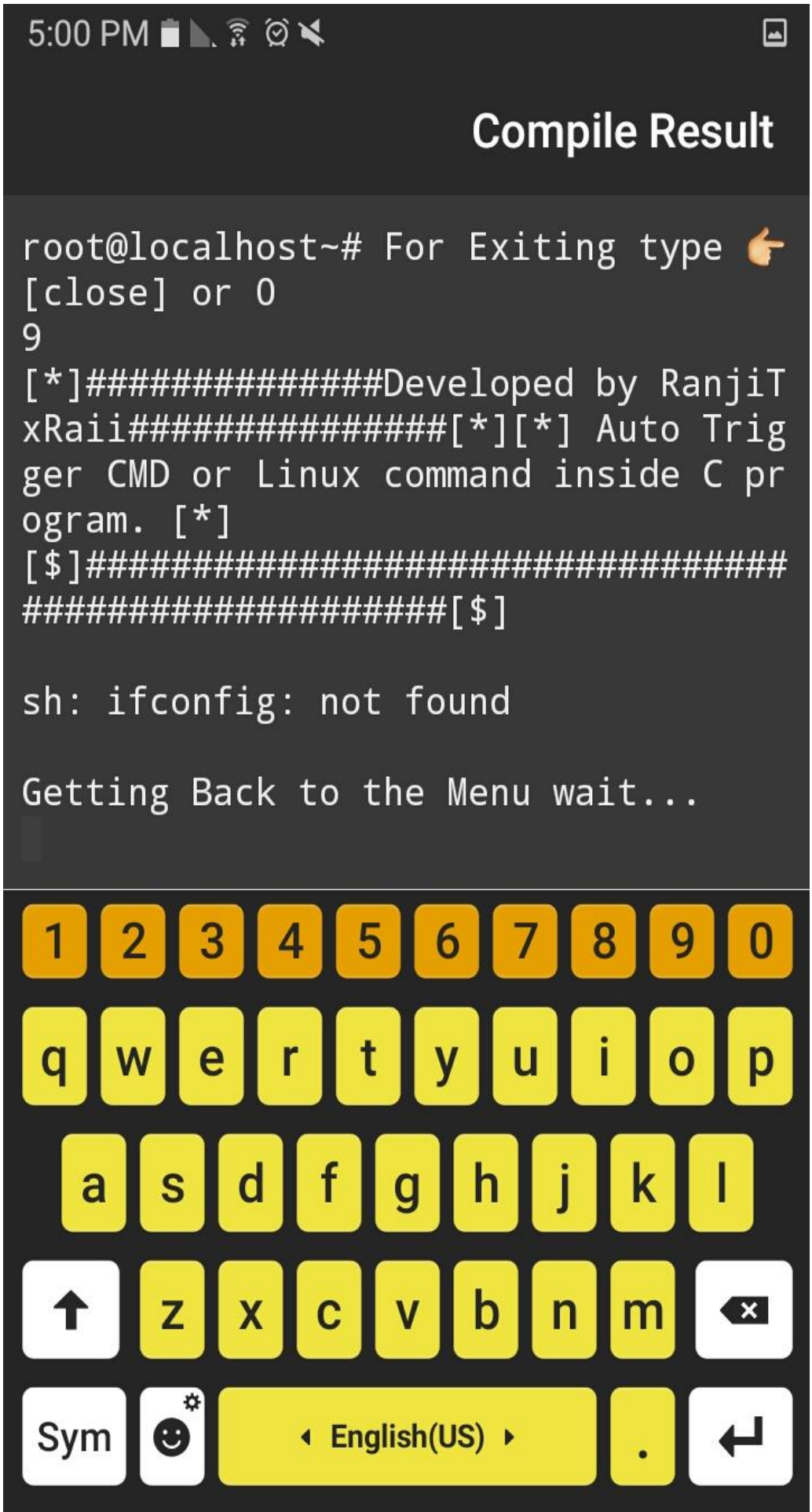
```
case 8:

 #ifdef __WIN64 | __linux__ | TARGET_OS_MAC
 printf("[*]##### Developed by RanjiTxRaii#####[*]\n");
  printf("[*]   Auto IP Addresses Finder.       [*]\n");
  printf("[*]#####################################[*]\n\n");
  printf("\n\n");

   n = socket(AF_INET, SOCK_DGRAM, 0);
   ifr.ifr_addr.sa_family = AF_INET;
   strncpy(ifr.ifr_name , address , IFNAMSIZ - 1);
   ioctl(n, SIOCGIFADDR, &ifr);

   printf("IP Address is %s - %s\n" , address , inet_ntoa(( (struct sockaddr_in *)&ifr.ifr_addr )-
>sin_addr) );

   #else __WIN64 | __linux__ | __WIN32
   printf("[*]##### Developed by RanjiTxRaii#####[*]\n");
   printf("[*]   Auto IP Addresses Finder.       [*]\n");
   printf("[*]#####################################[*]\n\n");

printf("\n\n");

   n = socket(AF_INET, SOCK_DGRAM, 0);
   ifr.ifr_addr.sa_family = AF_INET;
   strncpy(ifr.ifr_name , ipaddr , IFNAMSIZ - 1);
   ioctl(n, SIOCGIFADDR, &ifr);   printf("IP Address is %s - %s\n" , ipaddr , inet_ntoa(( (struct
sockaddr_in *)&ifr.ifr_addr )->sin_addr) );#endif;printf("\n\n");printf("[*]  Getting Back to the Menu
wait...[*]");printf("\n\n");sleep(4);goto runner;
```

OUTPUT:


4:58 PM
Compile Result
[*] Auto IP Addresses Finder.
[*]
[*]##
##[*]
IP Address is wlan0 - 192.168.1.222
[*] Getting Back to the Menu wait..
.[*]
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

```
case 9:
printf("[*]###############Developed by RanjiTxRaii################[*]");
printf("[*] Auto Trigger CMD or Linux command inside C program. [*]\n");
printf("[$]##########################################################[$]\n\n");
#ifdef __WIN32 | __WIN64
  winAndlinux=system("systeminfo");
  winAndlinux=system("winver");
#elif __linux__
 winAndlinux=system("ifconfig");
#else
printf("Other Unidentified Unix can't be execute");
#endif

printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep (5);
goto runner;
```

OUTPUT:


5:00 PM
Compile Result
root@localhost~# For Exiting type 👉
[close] or 0
9
[*]###############Developed by RanjiTxRaii################[*][*] Auto Trigger CMD or Linux command inside C program. [*]
[$]##[$]
sh: ifconfig: not found
Getting Back to the Menu wait...
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

```
case 10:

printf("[#]*********************************[#]\n");
printf("[!] Random Password Generator.    [!]\n");
printf("[*]       Developed.           [*]\n");
printf("[*]          By.              [*]\n");
printf("[*]      RanjiTxRaii.          [*]\n");
printf("[#]*********************************[#]\n\n");
printf("Enter a Number,How many Digits of a Password Uh want:\n\nroot@RanjiTxRaii~# ");
scanf("%d",&len);
//max length
/*char passwd[];*/
srand((unsigned int)(time(NULL)));

for(int i=0; i<len; i++ ) {
int random_number = rand()%4;
if(random_number == 0){

random_number = rand()%10;
passwd[i] = numbers[random_number]; }

else if(random_number == 1) {

random_number = rand()%26;
passwd[i] = Alphabets[random_number]; }

else if(random_number == 2) {
random_number = rand()%26;
```

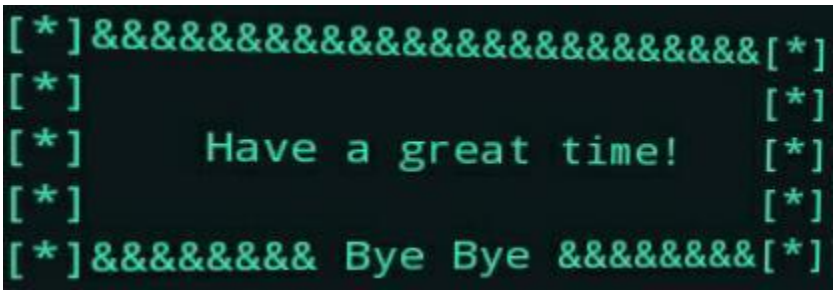
```
passwd[i] = alphabets[random_number]; }

else {
random_number = rand()%8;
passwd[i] = symbols[random_number]; }}

for(int i=0;i
<len;i++)
{
printf("%c", passwd[i]);
}
printf("\n");
printf("Getting Back to the Menu wait...");
printf("\n");
sleep (8);
goto runner;
```

OUTPUT:


5:01 PM
Compile Result
Random Password Generator Built in C language.
[*] Developed. [*
]
[*] By. [*
]
[*] RanjiTxRaii. [*
]
[#]**********[#
]
Enter a Number,How many Digits of a Password Uh want:
root@RanjiTxRaii~# 8
Aw4Sf=P
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(US)
.

```
case 0:
default:
    printf("[*]&&&&&&&&&&&&&&&&&&&&&&&&&&[*]\n");
    printf("[*]                    [*]\n");
    printf("[*]    Have a great time!   [*]\n");
    printf("[*]                    [*]\n");
    printf("[*]&&&&&&&& Bye Bye &&&&&&&&[*]\n");
   break;
}
return 0;
}
```

OUTPUT:



SYSTEM REQUIRERMENT

A .Hardware Requirement:-

We have built this project to publish the some knowledge about C programs. We have used different types of hardware and software program to complete this project.

1. PC or laptop with at least 80 G.B hard disk

2. PC or laptop with at least 512 M.RAM

3. PC or laptop with at least1.8 GHZ Processor

4. Mouse

5. Keyboard

6. Monitor for PC

OR

7. Android device

B. Software Requirement:-

Only the hardware is not sufficient to complete the project. There is to be compatible software installed in the PC/Laptop to make project successfully. Following software required to make project successfully:-

1.Windows operating system.

2.Text editor for coding and a compiler to compile programs(CODE::BLOCKS in our case).

3.Microsoft Office package.

4.C Coding

5.Word for Android

6.Mixplorer

CONCLUSION

As this is our second project we have ever done,so definitely there might be certain limitation and shortcoming in our project. We will try to develop better project by using the experience of this project knowledge of C in future.

The experience of building this project gave us a good platform to build real life program in future. So we heartily like to thanks to our respected Computer Science teacher MR. Uma Shankar Karn for giving us such an important project work as well a