

## PRACTICE LAB ASSIGNMENT 2

1. Write a program to read 10 integers. Display these numbers by printing three numbers in a line separated by commas.

### CODE

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

```
int main()
```

```
{
```

```
int a, b, c, d, e, f, g, h, i, j;
```

```
printf("Enter 10 integers")/a, b, c, d, e, f, g, h, i, j;
```

```
scanf("%d%d%d%d%d%d%d%d%d%d", &a, &b, &c, &d, &e, &f, &g, &h, &i, &j);
```

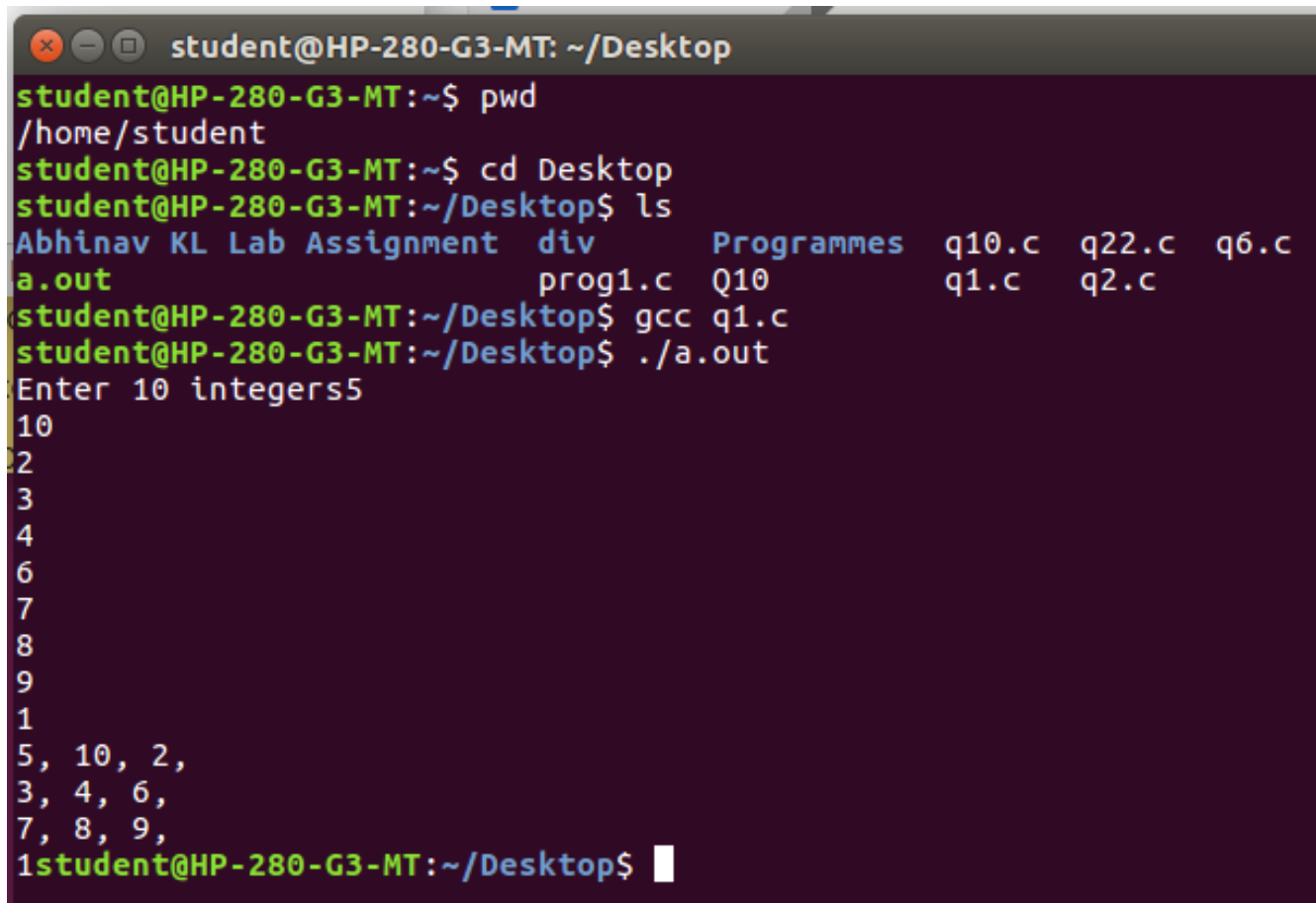
```
printf("%d, %d, %d, \n%d, %d, %d, \n%d, %d, %d, \n%d", a, b, c, d, e, f, g, h, i, j);
```

```
return 0;
```

```
}
```

```
#include<stdio.h>
int main()
{
    int a, b, c, d, e, f, g, h, i, j;
    printf("Enter 10 integers")/a, b, c, d, e, f, g, h, i, j;
    scanf("%d%d%d%d%d%d%d%d%d%d", &a, &b, &c, &d, &e, &f, &g, &h, &i, &j);
    printf("%d, %d, %d, \n%d, %d, %d, \n%d, %d, %d, \n%d", a, b, c, d, e, f, g, h, i, j);
    return 0;
}
```

### SS of the OUTPUT



```
student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q10.c  q22.c  q6.c
a.out                      prog1.c  Q10        q1.c   q2.c
student@HP-280-G3-MT:~/Desktop$ gcc q1.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter 10 integers5
10
2
3
4
6
7
8
9
1
5, 10, 2,
3, 4, 6,
7, 8, 9,
1student@HP-280-G3-MT:~/Desktop$
```

2. WAP to enter the temperature of a city in Fahrenheit Degree and convert it into Centigrade Degrees.

CODE

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

```
void main()
```

```
{
```

```
float f, c;
```

```
printf("Enter the temperature of a city in Fahrenheit Degree)/f;
```

```
scanf("%f%f", &f, &c);
```

```
c = (f-32)*(0.55556);
```

```
printf("The Celsius Degree Conversion is %f", c);
```

```
}
```

```
#include<stdio.h>
void main()
{
float f, c;
printf("Enter the temperature of a city in Fahrenheit Degree)/f;
scanf("%f%f", &f, &c);
c = (f-32)*(0.55556);
printf("The Celsius Degree Conversion is %f", c);
}
```

SS of the OUTPUT

```
student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment a.out div prog1.c Programmes q22.c q2.c q6.c
student@HP-280-G3-MT:~/Desktop$ gcc q2.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter the temperature of a city in Fahrenheit Degree70
./a.out
The Celsius Degree Conversion is 21.111280student@HP-280-G3-MT:~/Desktop$
```

3. WAP to print the ASCII value of a character that is being entered by the user.

CODE

```
#include<stdio.h>

int main()
{
char c;

printf("Enter any character to find out its ASCII value")/c;

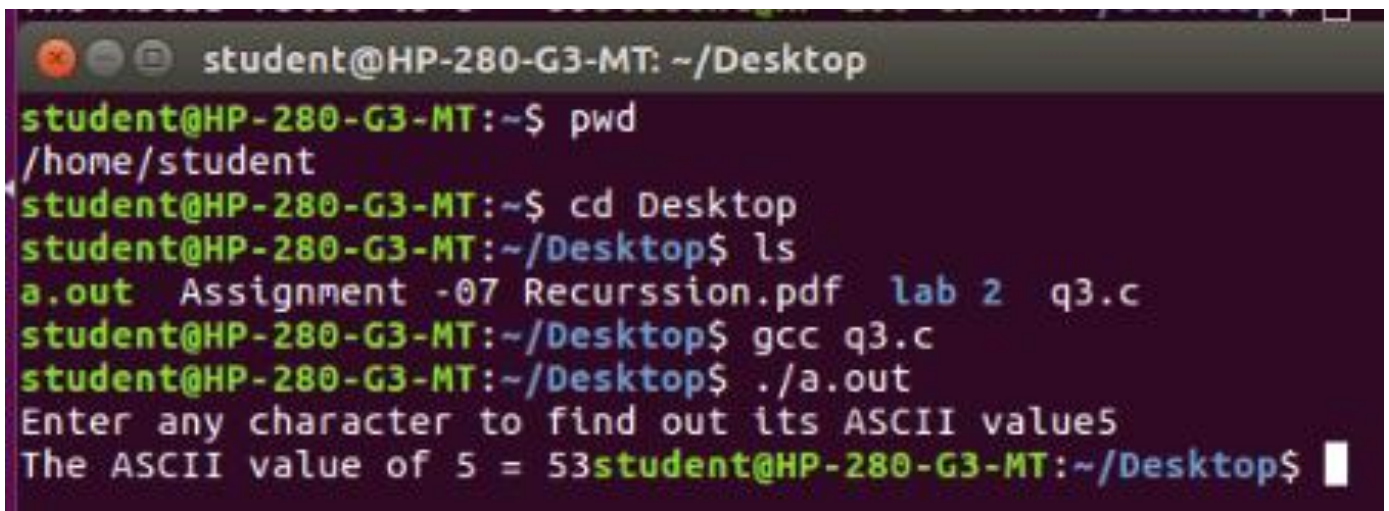
scanf("%c", &c);

printf("The ASCII value of %c = %d", c, c);

return 0;

}
```

### SS of the OUTPUT

A screenshot of a terminal window with a dark background. The window title is "student@HP-280-G3-MT: ~/Desktop". The terminal shows the following commands and output:   
1. Command: `pwd`   
Output: `/home/student`   
2. Command: `cd Desktop`   
3. Command: `ls`   
Output: `a.out Assignment -07 Recurssion.pdf lab 2 q3.c`   
4. Command: `gcc q3.c`   
5. Command: `./a.out`   
Output: `Enter any character to find out its ASCII values`   
6. User input: `5`   
Output: `The ASCII value of 5 = 53`   
The prompt `student@HP-280-G3-MT:~/Desktop$` is visible at the end of the line.

4. WAP to print the digit at one's place in any number entered by the user.

CODE

```
#include<stdio.h>

int main()
{
    int n, a;

    printf("Enter any number")/n;

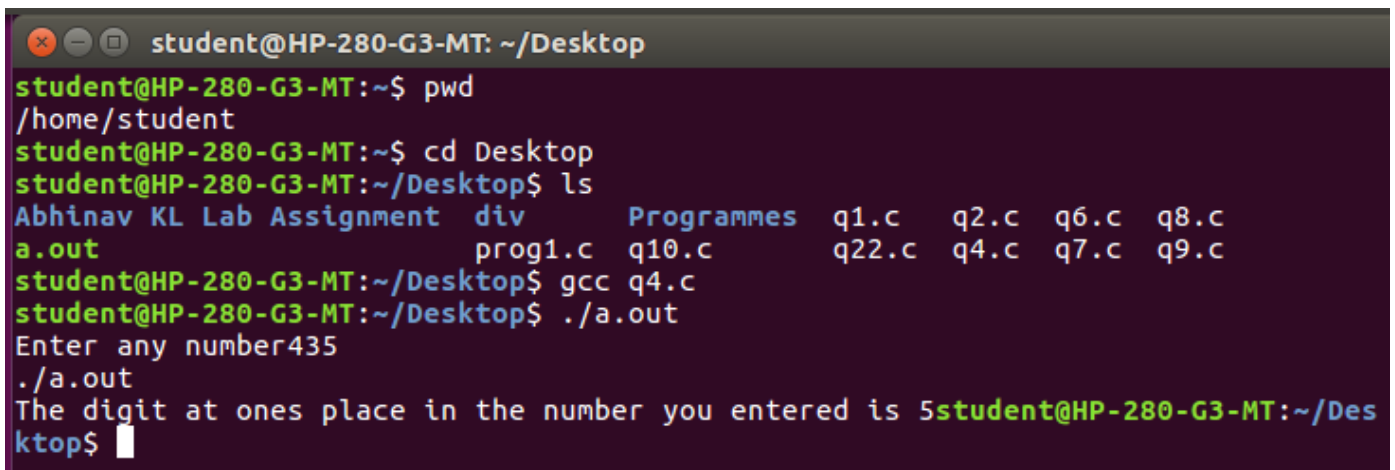
    scanf("%d%d", &n, &a);

    a = n%10;

    printf("The digit at ones place in the number you entered is %d", a);

    return 0;
}
```

### SS of the OUTPUT



```
student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q1.c  q2.c  q6.c  q8.c
a.out                      prog1.c  q10.c      q22.c  q4.c  q7.c  q9.c
student@HP-280-G3-MT:~/Desktop$ gcc q4.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter any number435
./a.out
The digit at ones place in the number you entered is 5student@HP-280-G3-MT:~/Desktop$
```

5. WAP that displays the size of every data type (int, long int, unsigned int, float, double, long double, char).

### CODE

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

```
4 int integerType;
5 long int longintegerType;
6 unsigned int unsignedintegerType;
7 float floatType;
8 double doubleType;
9 long double longdoubleType;
10 char charType;
11 printf("The size of int is: %ld", sizeof(integerType));
12 printf("The size of long int is: %ld", sizeof(longint
```

```

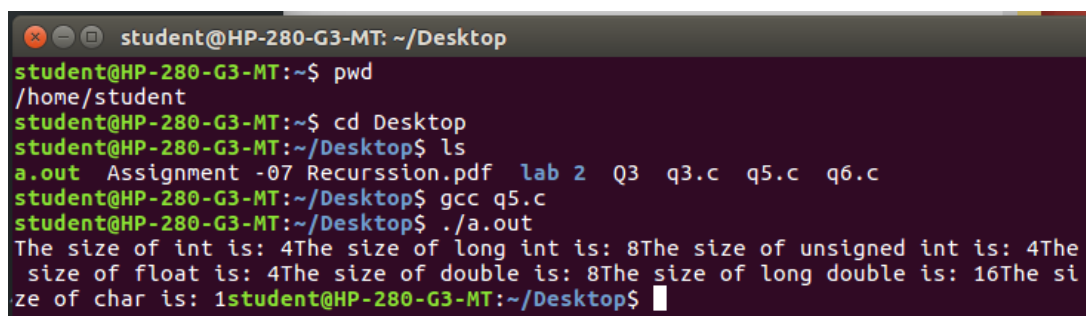
int main()
{
    int integerType;
    long int longintegerType;
    unsigned int unsignedintegerType;
    float floatType;
    double doubleType;
    long double longdoubleType;
    char charType;

    printf("The size of int is: %ld", sizeof(integerType));
    printf("The size of long int is: %ld", sizeof(longintegerType));
    printf("The size of unsigned int is: %ld", sizeof(unsignedintegerType));
    printf("The size of float is: %ld", sizeof(floatType));
    printf("The size of double is: %ld", sizeof(doubleType));
    printf("The size of long double is: %ld", sizeof(longdoubleType));
    printf("The size of char is: %ld", sizeof(charType));

    return 0;
}

```

## SS of the OUTPUT



```

student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
a.out  Assignment -07 Recursion.pdf  lab 2  Q3  q3.c  q5.c  q6.c
student@HP-280-G3-MT:~/Desktop$ gcc q5.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
The size of int is: 4The size of long int is: 8The size of unsigned int is: 4The
size of float is: 4The size of double is: 8The size of long double is: 16The si
ze of char is: 1student@HP-280-G3-MT:~/Desktop$

```

6. Write a program to read a character in upper case and then print it in lower case.

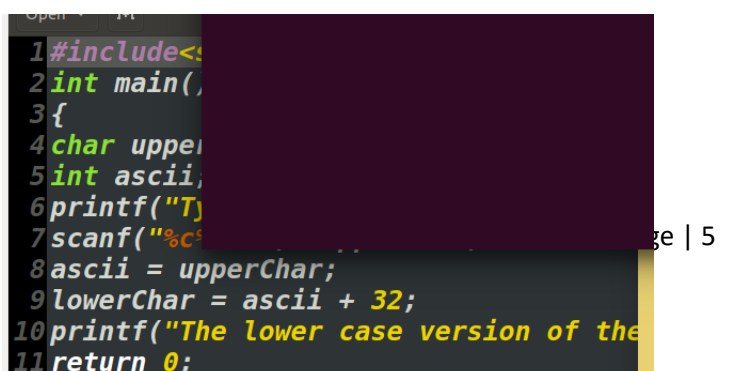
## CODE

```

#include<stdio.h>

int main()

```



```

1#include<stdio.h>
2int main()
3{
4    char upper;
5    int ascii;
6    printf("Enter an uppercase character: ");
7    scanf("%c", &upper);
8    ascii = upperChar;
9    lowerChar = ascii + 32;
10    printf("The lower case version of the character is: %c", lowerChar);
11    return 0;

```

```

{
char upperChar, lowerChar;

int ascii;

printf("Type any letter in caps")/upperChar;

scanf("%c%c%d", &upperChar, &lowerChar, &ascii);

ascii = upperChar;

lowerChar = ascii + 32;

printf("The lower case version of the letter is %c", lowerChar);

return 0;

}

```

## SS of the OUTPUT

```

student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
a.out Assignment -07 Recurssion.pdf lab 2 Q3 q3.c Q5 q5.c q6.c
student@HP-280-G3-MT:~/Desktop$ gcc q6.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Type any letter in capsG
./a.out
The lower case version of the letter is gstudent@HP-280-G3-MT:~/Desktop$

```

7. Write a program to calculate the sum of all the digits in a number. A number must be a five-digit number only.

For Example: If input number = 12345

Output: 15

## CODE

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

```

#include<stdio.h>
int main()
{
int n, a, b, c, d, e, sum ;
printf("Enter any 5-digit number")/n;
scanf("%d%d%d%d%d", &n, &a, &b, &c, &d, &e, &sum);
a = n/10000;
b = (n/1000) - (a*10);
c = (n/100) - (a*100) - (b*10);
d = (n/10) - (a*1000) - (b*100) - (c*10);
e = n%10;
sum = a + b + c + d + e;
printf("The sum of all the digits in the five digit number entered is %d", sum);
return 0;
}

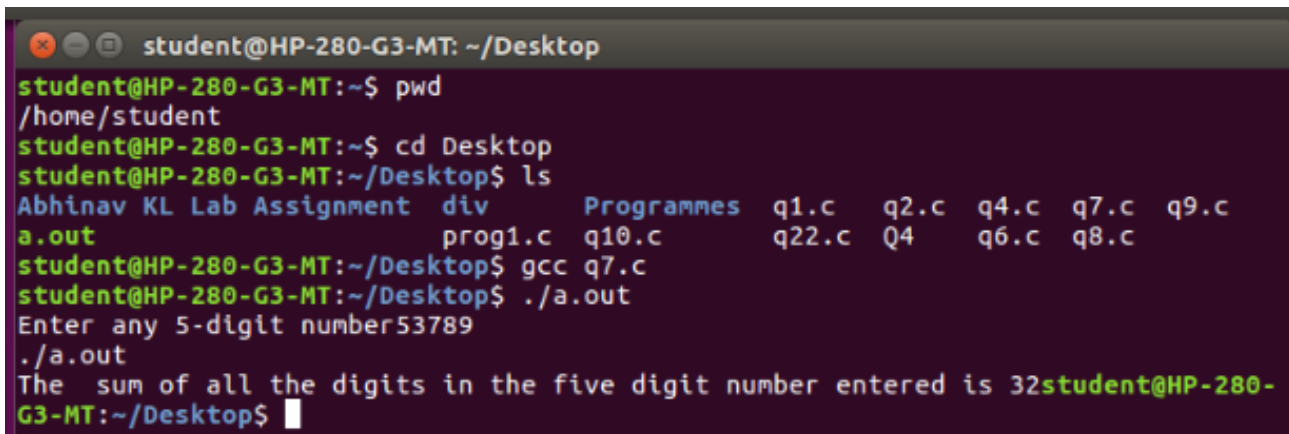
```

```

int main()
{
int n, a, b, c, d, e, sum ;
printf("Enter any 5-digit number")/n;
scanf("%d%d%d%d%d%d", &n, &a, &b, &c, &d, &e, &sum);
a = n/10000;
b = (n/1000) - (a*10);
c = (n/100) - (a*100) - (b*10);
d = (n/10) - (a*1000) - (b*100) - (c*10);
e = n%10;
sum = a + b + c + d + e;
printf("The sum of all the digits in the five digit number entered is %d", sum);
return 0;
}

```

### SS of the OUTPUT



```

student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q1.c  q2.c  q4.c  q7.c  q9.c
a.out                     prog1.c  q10.c      q22.c  Q4    q6.c  q8.c
student@HP-280-G3-MT:~/Desktop$ gcc q7.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter any 5-digit number53789
./a.out
The sum of all the digits in the five digit number entered is 32student@HP-280-
G3-MT:~/Desktop$

```

8. If a four-digit number is input through the keyboard, write a program to obtain the sum of the first and last digit of this number.

### CODE

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

```
int main()
```

```
{
```

```
int n, a, d, sum ;
```

```

#include<stdio.h>
int main()
{
int n, a, d, sum ;
printf("Enter any 4-digit number")/n;
scanf("%d%d%d", &n, &a, &d, &sum);
a = n/1000;
d = n%10;
sum = a + d;
printf("The sum of the first and last digit in the four digit number entered is %d", sum);
return 0;
}

```

```

printf("Enter any 4-digit number")/n;

scanf("%d%d%d%d", &n, &a, &d, &sum);

a = n/1000;

d = n%10;

sum = a + d;

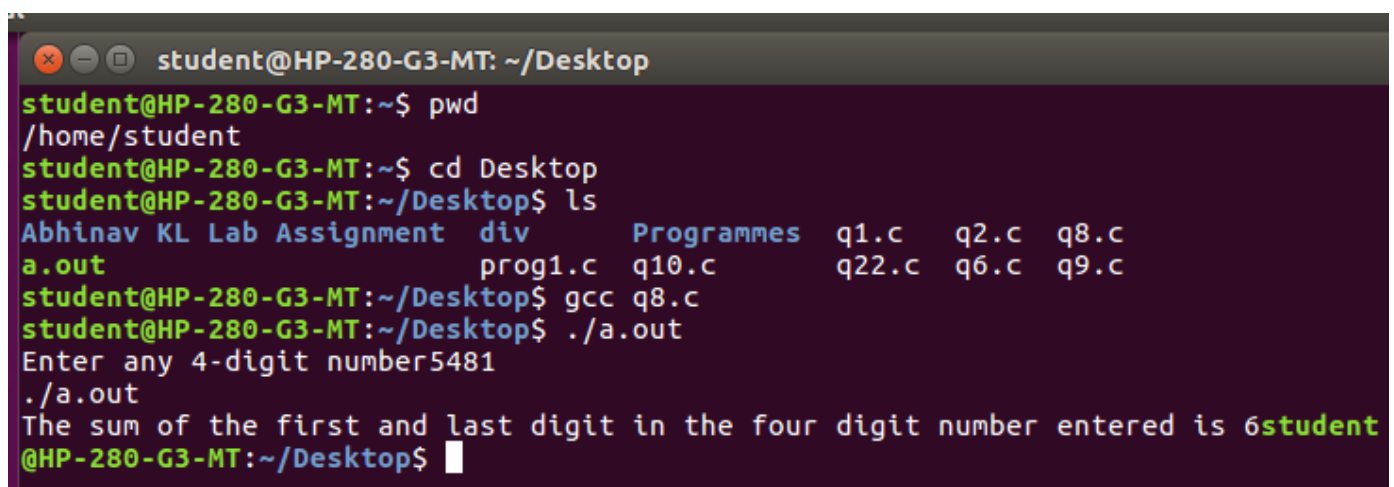
printf("The sum of the first and last digit in the four digit number entered is %d", sum);

return 0;

}

```

## SS of the OUTPUT



```

student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q1.c  q2.c  q8.c
a.out                      prog1.c  q10.c      q22.c  q6.c  q9.c
student@HP-280-G3-MT:~/Desktop$ gcc q8.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter any 4-digit number5481
./a.out
The sum of the first and last digit in the four digit number entered is 6student
@HP-280-G3-MT:~/Desktop$

```

9. If the total selling price of 15 items and the total profit earned on them is input through the keyboard, write a program to find the cost price of one item.

## CODE

```

#include<stdio.h>

void main()

{

float sp, p, cp;

printf("Enter the total selling price of 15 objects and total profit earned on them respectively
")/sp, p;

scanf("%f%f%f", &sp, &p, &cp);

cp = (sp - p)/15;

printf("The cost price of one item is %f", cp);

}

float sp, p, cp;

printf("Enter the total selling price of 15 objects and total profit earned on them respectively
")/sp, p;

scanf("%f%f%f", &sp, &p, &cp);

```



```

cp = (sp - p)/15;

printf("The cost price of one item is %f", cp);

}

```

## SS of the OUTPUT

```

student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q1.c  q2.c  q9.c
a.out                      prog1.c  q10.c      q22.c  q6.c
student@HP-280-G3-MT:~/Desktop$ gcc q9.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter the total selling price of 15 objects and total profit earned on them resp
ectively 1000
50
./a.out
The cost price of one item is 63.333332student@HP-280-G3-MT:~/Desktop$

```

10.The distance between two cities (in km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimeters.

## CODE

```

#include<stdio.h>

void main()
{
float n, m, f, i, cm;
printf("Enter the distance between two cities in kilometres")/n;
scanf("%f%f%f%f", &n, &m, &f, &i, &cm);
m = n * 1000;
f = n * 3280.8399;
i = n * 39370.0787;
cm = n * 100000;
printf("The distance in metres is %f \nThe distance in feet is %f \nThe distance in inches is %f \nThe distance in centimetres is %f", m, f, i, cm);
}

float n, m, f, i, cm;

printf("Enter the distance between two cities in kilometres")/n;

scanf("%f%f%f%f%f", &n, &m, &f, &i, &cm);

m = n * 1000;

f = n * 3280.8399;

```

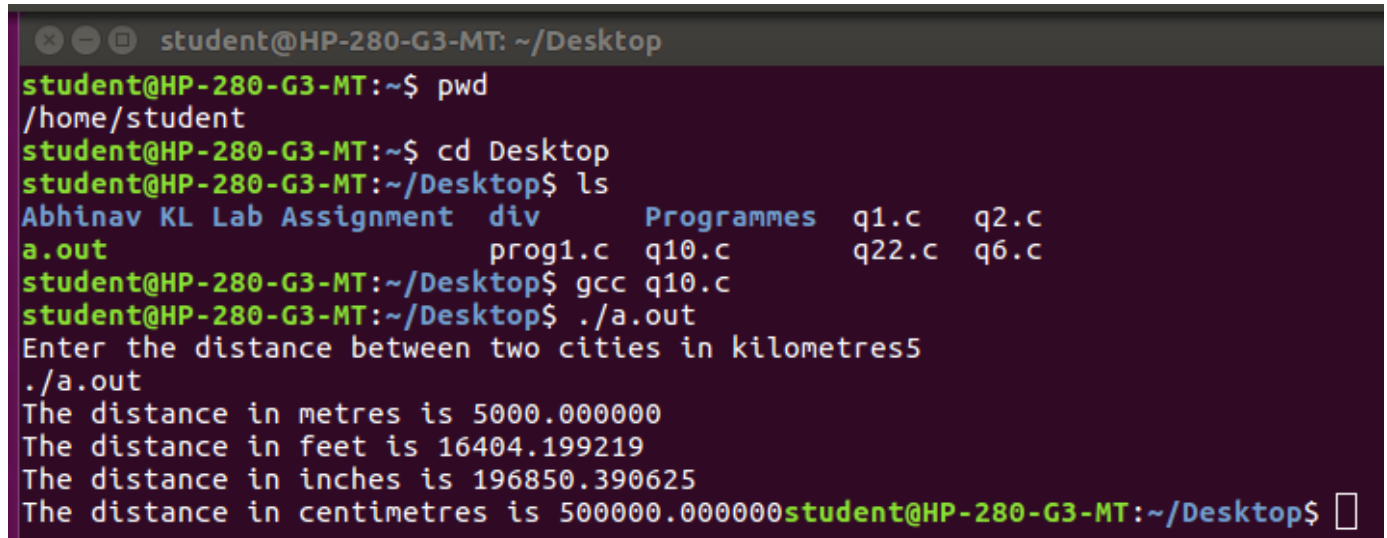
```
i = n * 39370.0787;
```

```
cm = n * 100000;
```

```
printf("The distance in metres is %f \n\nThe distance in feet is %f \n\nThe distance in inches is %f \n\nThe distance in centimetres is %f", m, f, i, cm);
```

```
}
```

## SS of the OUTPUT



```
student@HP-280-G3-MT: ~/Desktop
student@HP-280-G3-MT:~$ pwd
/home/student
student@HP-280-G3-MT:~$ cd Desktop
student@HP-280-G3-MT:~/Desktop$ ls
Abhinav KL Lab Assignment  div      Programmes  q1.c  q2.c
a.out                     prog1.c  q10.c      q22.c  q6.c
student@HP-280-G3-MT:~/Desktop$ gcc q10.c
student@HP-280-G3-MT:~/Desktop$ ./a.out
Enter the distance between two cities in kilometres5
./a.out
The distance in metres is 5000.000000
The distance in feet is 16404.199219
The distance in inches is 196850.390625
The distance in centimetres is 500000.000000student@HP-280-G3-MT:~/Desktop$
```