

Name Mohd Monish

Registration No. 2021CA063

PROGRAM 1

/*1. WAP to print information about yourself.*/

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

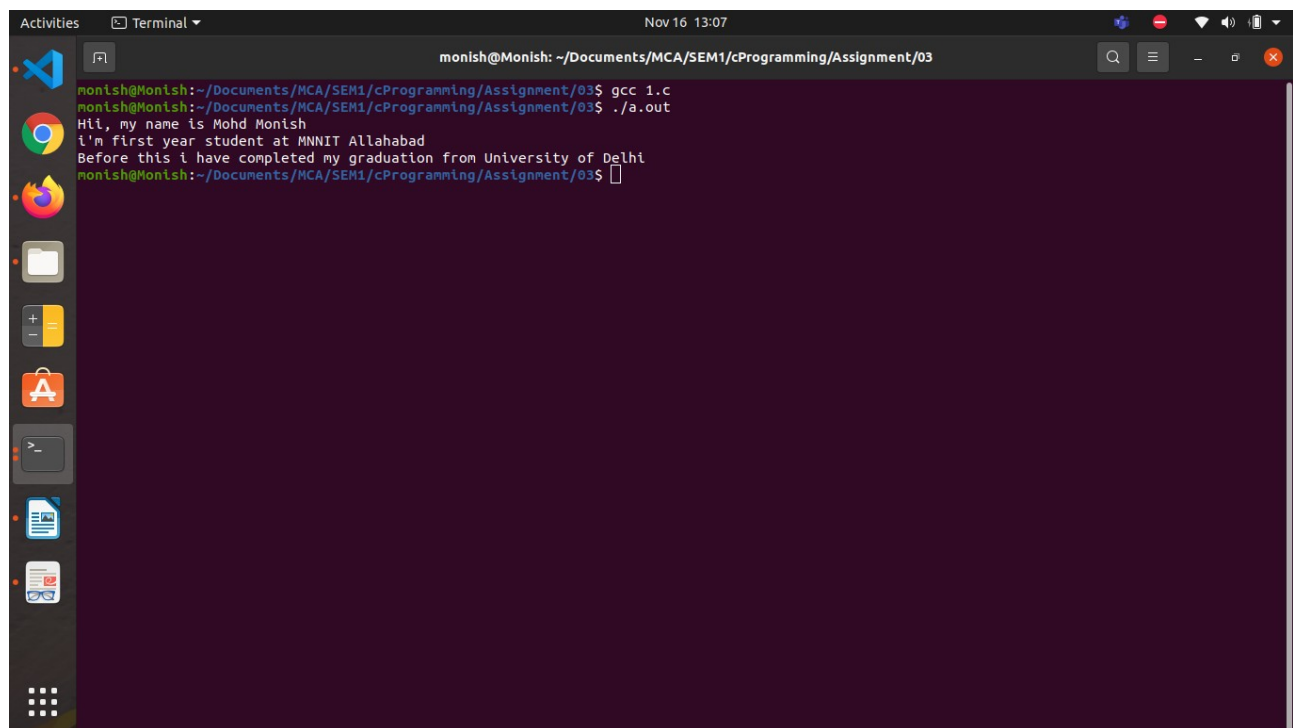
```
int main(){
```

```
printf("Hii, my name is Mohd Monish\ni'm first year student at MNNIT Allahabad");
```

```
printf("\nBefore this i have completed my graduation from University of Delhi\n");
```

```
}
```

OUTPUT 1



The screenshot shows a terminal window titled "Terminal" with the date and time "Nov 16 13:07". The user is logged in as "monish" and the current directory is "~/Documents/MCA/SEM1/cProgramming/Assignment/03". The terminal shows the following commands and output:

```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 1.c
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out
Hii, my name is Mohd Monish
i'm first year student at MNNIT Allahabad
Before this i have completed my graduation from University of Delhi
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

Registration No. 2021CA063

PROGRAM 2

/*2. Write a program in C that takes input through keyboard for two integer variables and calculate their sum, difference, multiplication & division.

*/

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

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

```
int main(){
```

```
float a,b,result=0;
```

```
int choice;
```

```
printf("\nPlease Enter the First Element : ");
```

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

```
printf("\nPlease Enter the Second Element : ");
```

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

```
//value of a and b are provide by user
```

```
while(1){
```

```
//always true so it run againg and again
```

```
printf("\n1.Addition \n2.Substraction\n3.Multiplication \n4.Divison\n5.Exit \n\nPlease enter your choice : ");
```

```
//provide a menu bar of operations
```

```
scanf("%d",&choice);
```

```
//when user enter their operation type
```

```
switch(choice){
```

```
case 1 : {printf("\nAddition Operation Selected\n");
```

```
result=a+b;
```

```
break;}
```

```
case 2 : {printf("\nSubstraction Operation Selected\n");
```

```
result=a-b;
```

```
break;}
```

```
case 3 : {printf("\nMultiplication Operation Selected\n");
```

```
result=a*b;
```

```
break;}
```

```
case 4 : {printf("\nDivison Operation Selected\n");
```

```
result=a/b;
```

```
break;}
```

```
case 5:exit(0);//exit case
```

```
default :{ printf("\n\n Ivalid Choice !!!!!!!\n\n");
```

```
break;}
```

```
//if user enter any other number that will not given in options it will be wrong choice
```

```
}
```

```
printf("Final Result = %f \n\n\n",result);
```

```
//final result will be display here
```

```
}
```

```
return 0;
```

```
}
```

```
OUTPUT 1
```

```
Activities Terminal Nov 16 13:34 monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 2.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out

Please Enter the First Element : 4

Please Enter the Second Element : 2

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit

Please enter your choice : 1

Addition Operation Selected
Final Result = 6.000000

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit

Please enter your choice : 2

Substraction Operation Selected
Final Result = 2.000000

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit
```

OUTPUT 2

```
Activities Terminal Nov 16 13:34 monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
Final Result = 2.000000

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit

Please enter your choice : 3

Multiplication Operation Selected
Final Result = 8.000000

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit

Please enter your choice : 4

Divison Operation Selected
Final Result = 2.000000

1.Addition
2.Substraction
3.Multiplication
4.Divison
5.Exit

Please enter your choice : 5
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

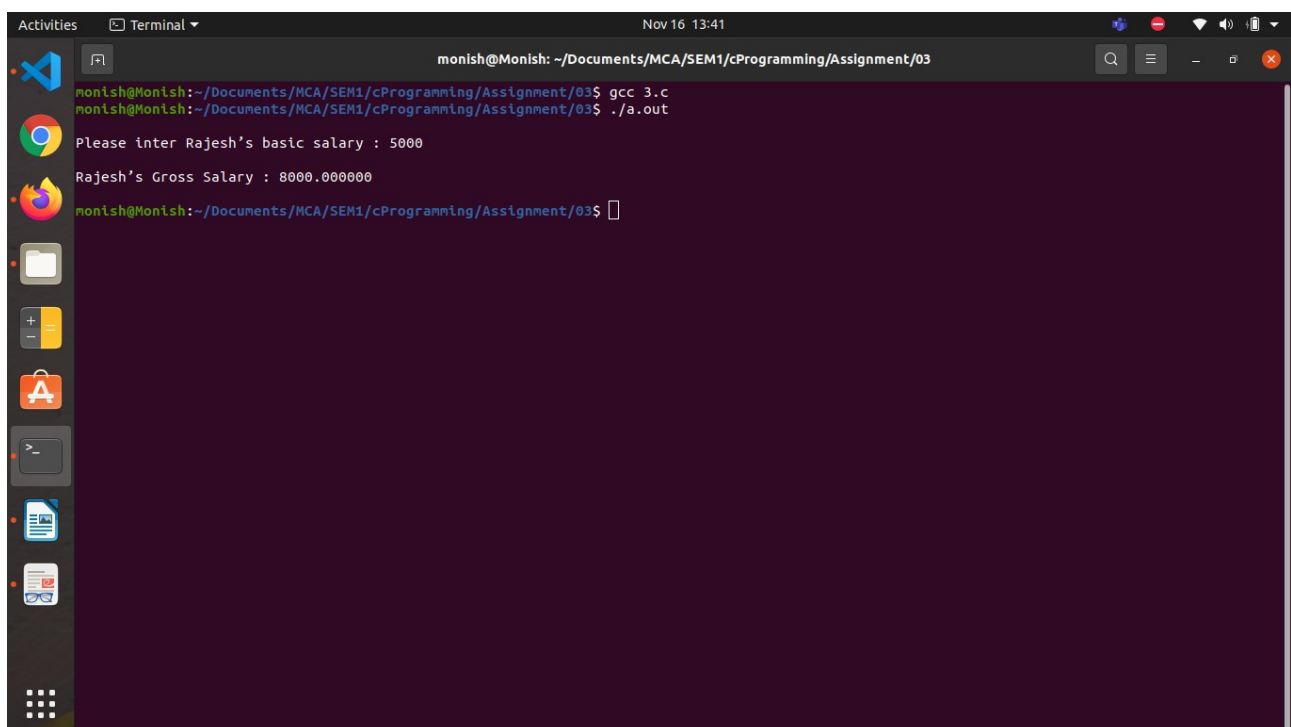
Registration No. 2021CA063

PROGRAM 3

/*3. Rajesh's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write a program in C to calculate his gross salary.*/

```
#include<stdio.h>
int main(){
int t;
float basicSalary,grosSgalary,HRA,DA;
printf("\nPlease inter Rajesh's basic salary : ");
//taking input Rajesh's basic salary
scanf("%f",&basicSalary);
//read and store in variable
HRA=basicSalary*.20;
//calculate HRA
DA=basicSalary*.40;
//calculate DA
grosSgalary=basicSalary+HRA+DA;
//calculating grosSgalary
printf("\nRajesh's Gross Salary : %f\n\n",grosSgalary);
//final output here
return 0;
}
```

OUTPUT



```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 3.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out
Please inter Rajesh's basic salary : 5000
Rajesh's Gross Salary : 8000.000000
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

Registration No. 2021CA063

PROGRAM 4

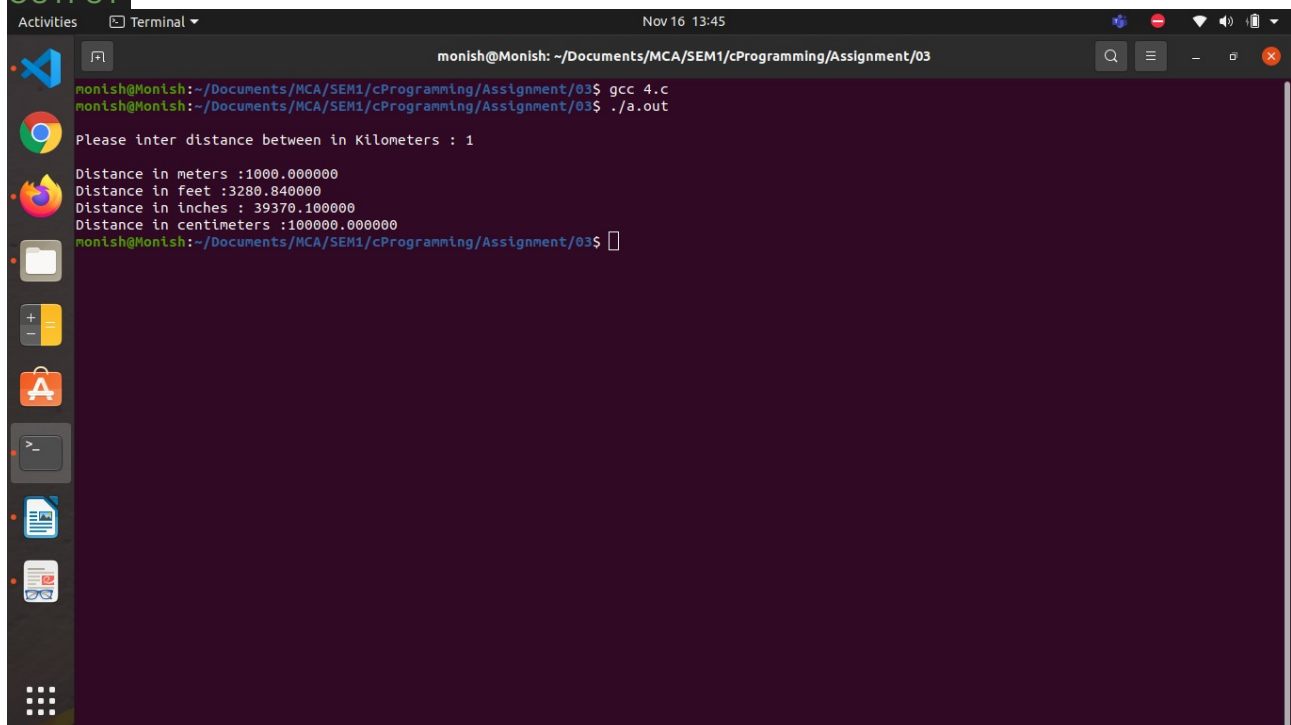
/*4. The distance between two cities (in Km) is input through the keyboard. Write a program

to convert and print this distance in meters, feet, inches and centimeters. */

```
#include<stdio.h>
int main(){
float distance;
printf("\nPlease enter distance between in Kilometers : ");
//taking input from user distance in kilometers
scanf("%f",&distance);
//store value in distance variable
printf("\nDistance in meters :%f",distance*1000);
//convert distance in meter
printf("\nDistance in feet :%f",distance*3280.84);
//convert distance in feet
printf("\nDistance in inches : %f",distance*39370.1);
//convert distance in inches
printf("\nDistance in centimeters :%f\n",distance*100000);
//convert distance in centimeters
```

```
}
```

OUTPUT



```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 4.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out

Please enter distance between in Kilometers : 1

Distance in meters :1000.000000
Distance in feet :3280.840000
Distance in inches : 39370.100000
Distance in centimeters :100000.000000
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

Registration No. 2021CA063

PROGRAM 5

/*5. If the marks obtained by a student in five different subjects are input through the keyboard, find

out the aggregate marks and percentage marks obtained by the student. Assume maximum

marks in each subject=100.*/

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

```
int main(){
```

```
float marks=0,total_marks=0;
```

```
for (int i = 0; i < 5; i++)
```

```
{ printf("\nPlease enter the subject marks of %d : ",i+1);
```

```
//taking input of 5 subjects marks one by one
```

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

```
if (marks>100|| marks<0){
```

```
/*if user enter invalid marks then if condition will be true and error message give and user need to enter the correct marks */
```

```
printf("\nInvalid Marks!\nPlease enter marks greater than or equals to zero and less than or equals to 100!\n");
```

```
i--;
```

```
marks=0;
```

```
continue; }
```

```
total_marks=total_marks+marks;}
```

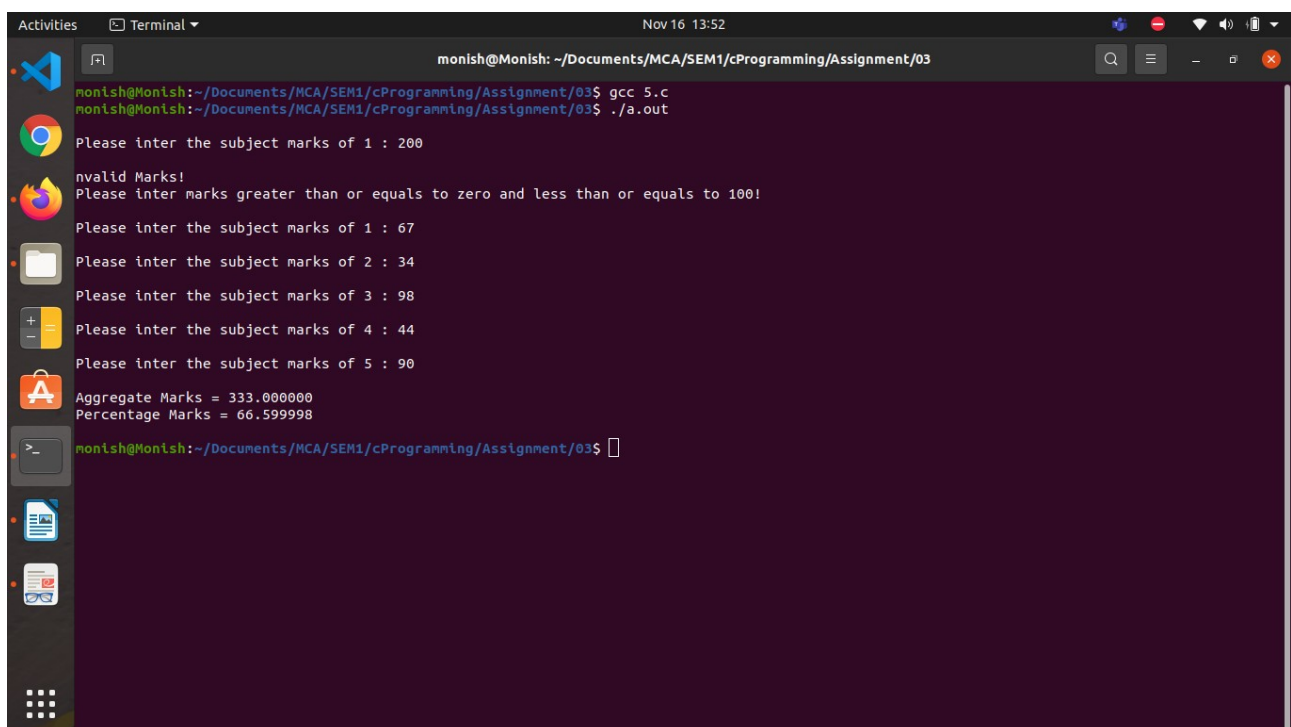
```
printf("\nAggregate Marks = %f",total_marks);
```

```
printf("\nPercentage Marks = %f\n\n",total_marks/5);
```

```
return 0;
```

```
}
```

OUTPUT



```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 5.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out

Please enter the subject marks of 1 : 200

Invalid Marks!
Please enter marks greater than or equals to zero and less than or equals to 100!

Please enter the subject marks of 1 : 67

Please enter the subject marks of 2 : 34

Please enter the subject marks of 3 : 98

Please enter the subject marks of 4 : 44

Please enter the subject marks of 5 : 90

Aggregate Marks = 333.000000
Percentage Marks = 66.599998

monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

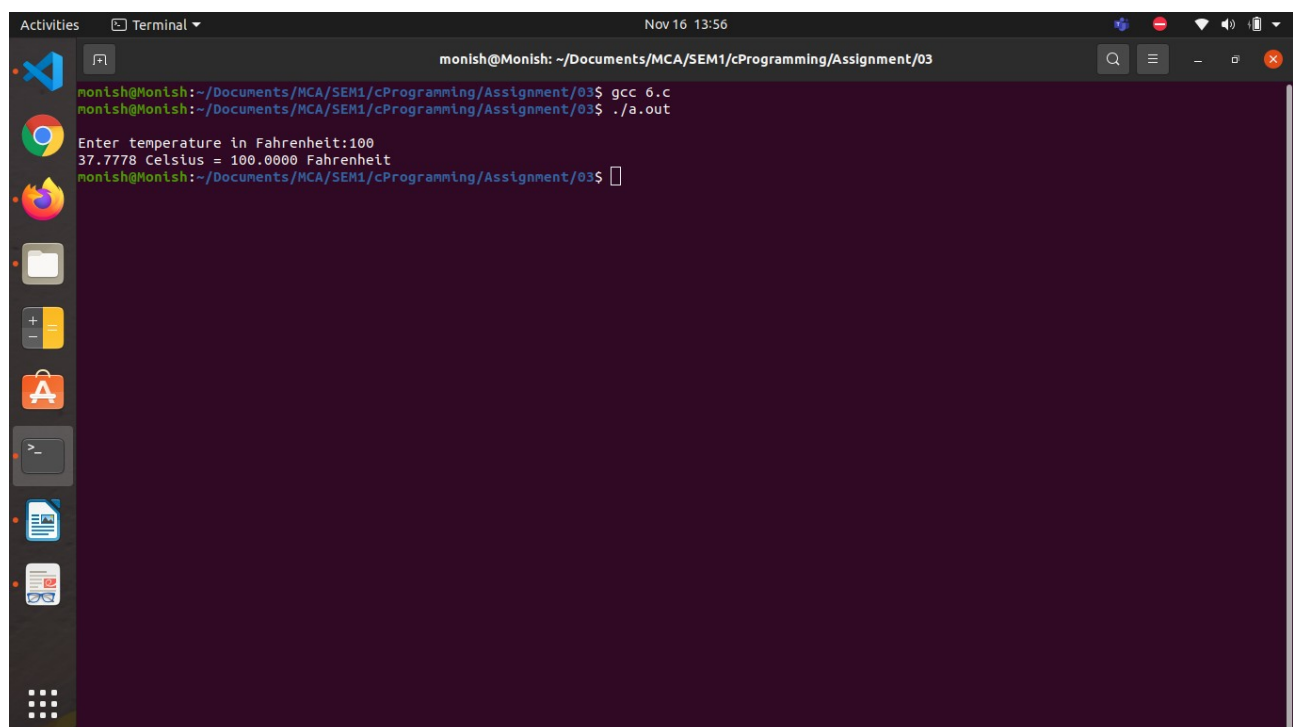
Registration No. 2021CA063

PROGRAM 6

/*6. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a program to convert this temperature into Centigrade degrees.*/

```
#include<stdio.h>
void main()
{
float celsius,fahrenheit;
printf("\nEnter temperature in Fahrenheit:");
//taking temperature input from user in Fahrenheit
scanf("%f",&fahrenheit);
//storing value
celsius=(fahrenheit - 32)*5/9;
//converting in celsius
printf("%.4f Celsius = %.4f Fahrenheit \n", celsius, fahrenheit);
}
```

OUTPUT



The screenshot shows a terminal window titled "Terminal" with the date and time "Nov 16 13:56". The user is logged in as "monish" and is in the directory "~/Documents/MCA/SEM1/cProgramming/Assignment/03". The terminal shows the following commands and output:

```
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 6.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out
Enter temperature in Fahrenheit:100
37.7778 Celsius = 100.0000 Fahrenheit
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

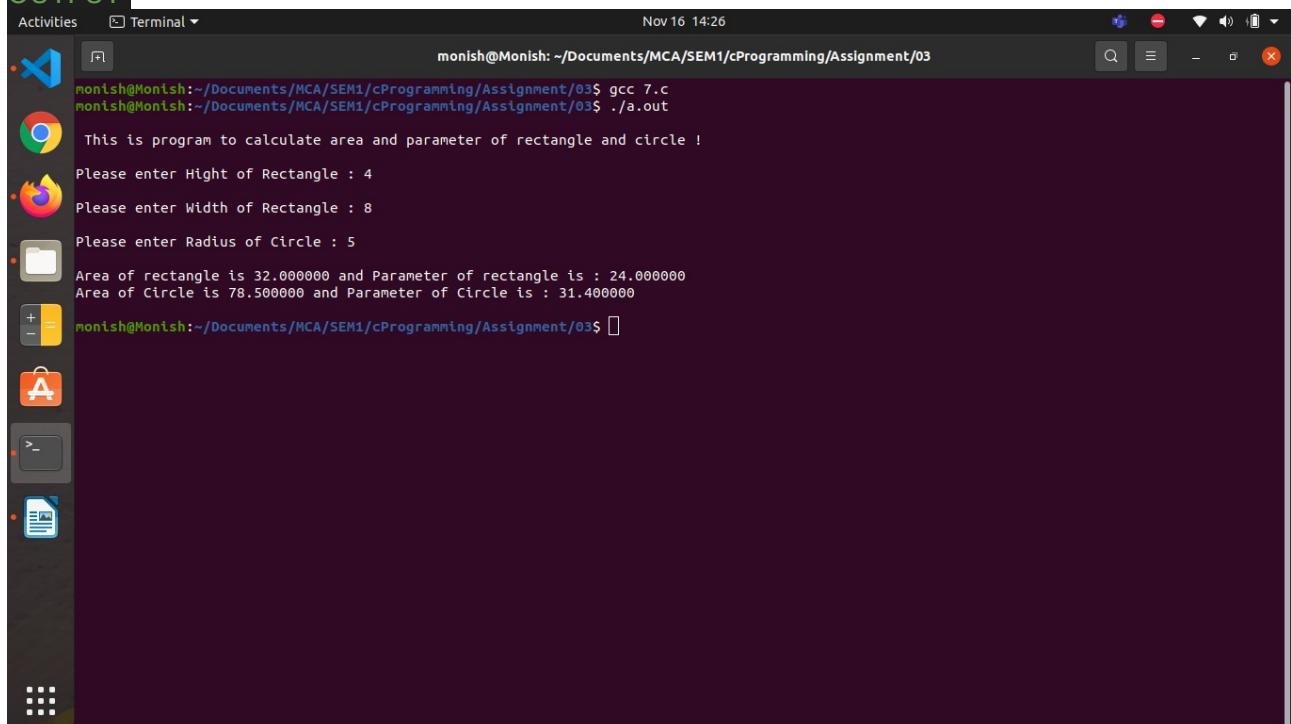
Registration No. 2021CA063

PROGRAM 7

/*7. The length and breadth of a rectangle and radius of a circle are input through the keyboard. Write a program in C to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.*/

```
#include<stdio.h>
int main(){
printf("\n This is program to calculate area and parameter of rectangle and circle !\n");
float hight,width,radius;
printf("\nPlease enter Hight of Rectangle : ");
scanf("%f",&hight);
//taking input height of rectangle
printf("\nPlease enter Width of Rectangle : ");
scanf("%f",&width);
//taking input Radius of rectangle
printf("\nPlease enter Radius of Circle : ");
scanf("%f",&radius);
//taking input Radius of rectangle
printf("\nArea of rectangle is %f and Parameter of rectangle is : %f",hight*width,2*(hight+width));
//calculating area and parameter of rectangle i.e. hight*width and 2(hight+width)
printf("\nArea of Circle is %f and Parameter of Circle is : %f",3.14*radius*radius,2*3.14*radius);
//calculating area and parameter of Circle
printf("\n\n");
}
```

OUTPUT



```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 7.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out

This is program to calculate area and parameter of rectangle and circle !

Please enter Hight of Rectangle : 4

Please enter Width of Rectangle : 8

Please enter Radius of Circle : 5

Area of rectangle is 32.000000 and Parameter of rectangle is : 24.000000
Area of Circle is 78.500000 and Parameter of Circle is : 31.400000

monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```


Name Mohd Monish

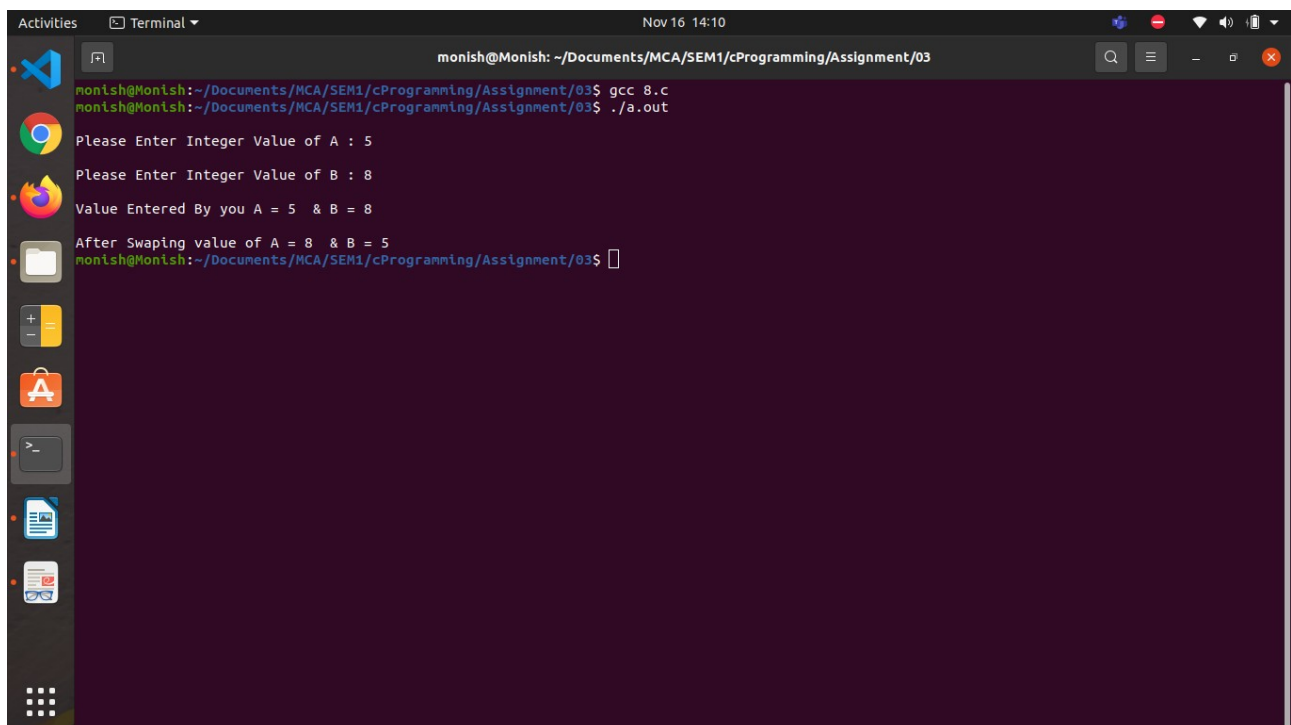
Registration No. 2021CA063

PROGRAM 8

/*8. Two numbers are input through the keyboard into two locations A and B. Write a program in C to interchange the contents of A and B. */

```
#include<stdio.h>
int main(){
int a,b,temp;
printf("\nPlease Enter Integer Value of A : ");
scanf("%d",&a);
printf("\nPlease Enter Integer Value of B : ");
scanf("%d",&b);
printf("\nValue Entered By you A = %d & B = %d \n",a,b);
temp=a;
//storing vlaue of a in temp variable
a=b;
//transfiring value of a in b
b=temp;
//storing value of temp in b
printf("\nAfter Swaping value of A = %d & B = %d \n",a,b);
//display the result afer swaping
return 0;
}
```

OUTPUT



The screenshot shows a terminal window titled "monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03". The user has compiled a C program named "8.c" using "gcc" and executed it with "./a.out". The program prompts the user to enter integer values for A and B. The user enters 5 for A and 8 for B. The program then displays the values entered and the result after swapping, showing A = 8 and B = 5. The terminal output is as follows:

```
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 8.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out
Please Enter Integer Value of A : 5
Please Enter Integer Value of B : 8
Value Entered By you A = 5 & B = 8
After Swaping value of A = 8 & B = 5
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

Name Mohd Monish

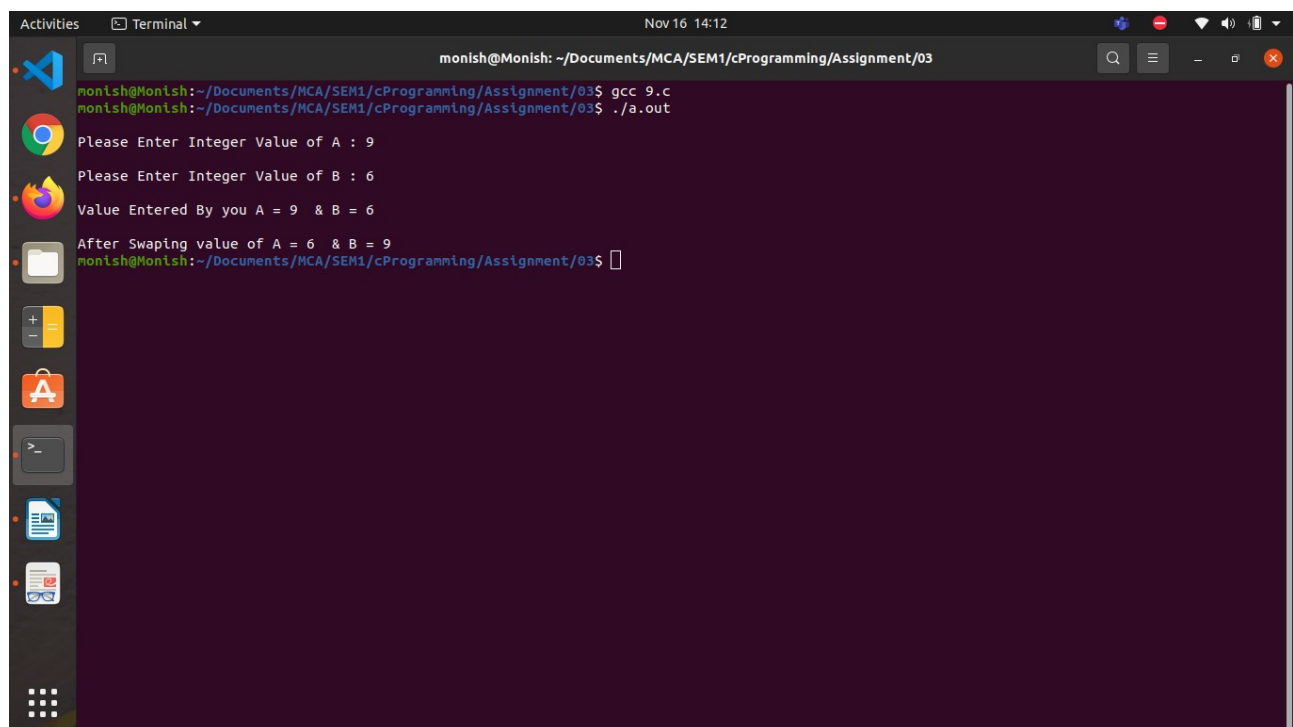
Registration No. 2021CA063

PROGRAM 9

//9. WAP to swap two variables without using 3 rd variable.

```
#include<stdio.h>
int main(){
int a,b;
printf("\nPlease Enter Integer Value of A : ");
scanf("%d",&a);
printf("\nPlease Enter Integer Value of B : ");
scanf("%d",&b);
printf("\nValue Entered By you A = %d & B = %d \n",a,b);
a=a+b-(b=a);
printf("\nAfter Swaping value of A = %d & B = %d \n",a,b);
}
```

OUTPUT



The screenshot shows a terminal window titled "monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03" with the date and time "Nov 16 14:12". The terminal displays the following commands and output:

```
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 9.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out
Please Enter Integer Value of A : 9
Please Enter Integer Value of B : 6
Value Entered By you A = 9 & B = 6
After Swaping value of A = 6 & B = 9
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```

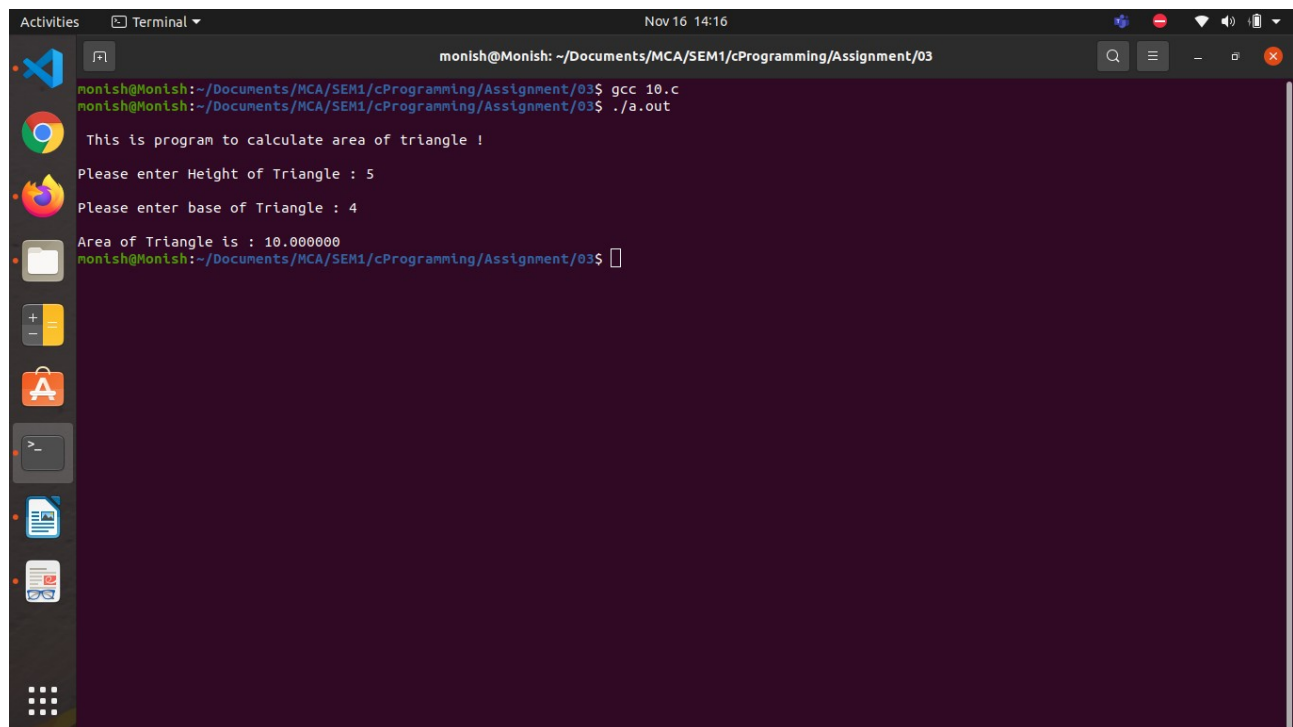
Name Mohd Monish

Registration No. 2021CA063

PROGRAM 10

```
/*10. WAP to find the area of a triangle given base and height as input from key board.*/
#include<stdio.h>
int main(){
printf("\n This is program to calculate area of triangle !\n");
float hight,base;
printf("\nPlease enter Height of Triangle : ");
scanf("%f",&hight);
//taking input height base of Triangle
printf("\nPlease enter base of Triangle : ");
scanf("%f",&base);
// taking input base of Triangle
printf("\nArea of Triangle is : %f \n",.5*hight*base);
//claculating area of triangle
}
```

OUTPUT

A screenshot of a Linux terminal window. The title bar shows 'Nov 16 14:16' and 'Terminal'. The terminal content shows the user 'monish@Monish' in the directory '~/Documents/MCA/SEM1/cProgramming/Assignment/03'. The user runs 'gcc 10.c' and then './a.out'. The program outputs: 'This is program to calculate area of triangle !', 'Please enter Height of Triangle : 5', 'Please enter base of Triangle : 4', and 'Area of Triangle is : 10.000000'. The prompt 'monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03\$' is visible at the bottom.

```
monish@Monish: ~/Documents/MCA/SEM1/cProgramming/Assignment/03
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ gcc 10.c
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$ ./a.out

This is program to calculate area of triangle !

Please enter Height of Triangle : 5

Please enter base of Triangle : 4

Area of Triangle is : 10.000000
monish@Monish:~/Documents/MCA/SEM1/cProgramming/Assignment/03$
```