

# IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

## 1. PROGRAM TO CALCULATE SIMPLE INTEREST.

```
// to calculate simple interest
// code by Sneha A52
#include<stdio.h>
int main()
{
    float amt,year,interest,final_amt;
    printf("Enter the intial amount:");
    scanf("%f",&amt);
    printf("Enter the rate of interest per year:");
    scanf("%f",&interest);
    printf("Enter the fraction of years:");
    scanf("%f",&year);
    final_amt=amt+(amt*interest*year)/100;
    printf("The final amount is :%f",final_amt);
    return 0;
}
```

Result:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) {
gcc IOP_111.c -o IOP_111 } ; if ($?) { .\IOP_111 }
Enter the intial amount:10000
Enter the rate of interest per year:12.5
Enter the fraction of years:3.5
The final amount is :14375.000000
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

2. PROGRAM TO READ MARKS OF FIVE SUBJECT OF A STUDENT AND CALCULATE TOTAL AND PERCENTAGE.

```
//TO READ MARKS OF FIVE SUBJECT OF A STUDENT AND CALCULATE TOTAL AND PERCENTAGE.
// code by sneha A52
#include<stdio.h>
int main()
{
    int s1,s2,s3,s4,s5,total;
    float percent;

    printf("Enter the marks of subject 1");
    scanf("%d",&s1);
    printf("Enter the marks of subject 2");
    scanf("%d",&s2);
    printf("Enter the marks of subject 3");
    scanf("%d",&s3);
    printf("Enter the marks of subject 4");
    scanf("%d",&s4);
    printf("Enter the marks of subject 5");
    scanf("%d",&s5);

    total=s1+s2+s3+s4+s5;
    percent=total/5;
    printf("The total marks of subject are:%d",total);
    printf("\nThe total percentage:%f",percent);
    return 0;
}
```

Result:

```
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the marks of subject 1 90
Enter the marks of subject 2 90
Enter the marks of subject 3 89
Enter the marks of subject 4 97
Enter the marks of subject 5 96
The total marks of subject are:462
The total percentage:92.000000
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

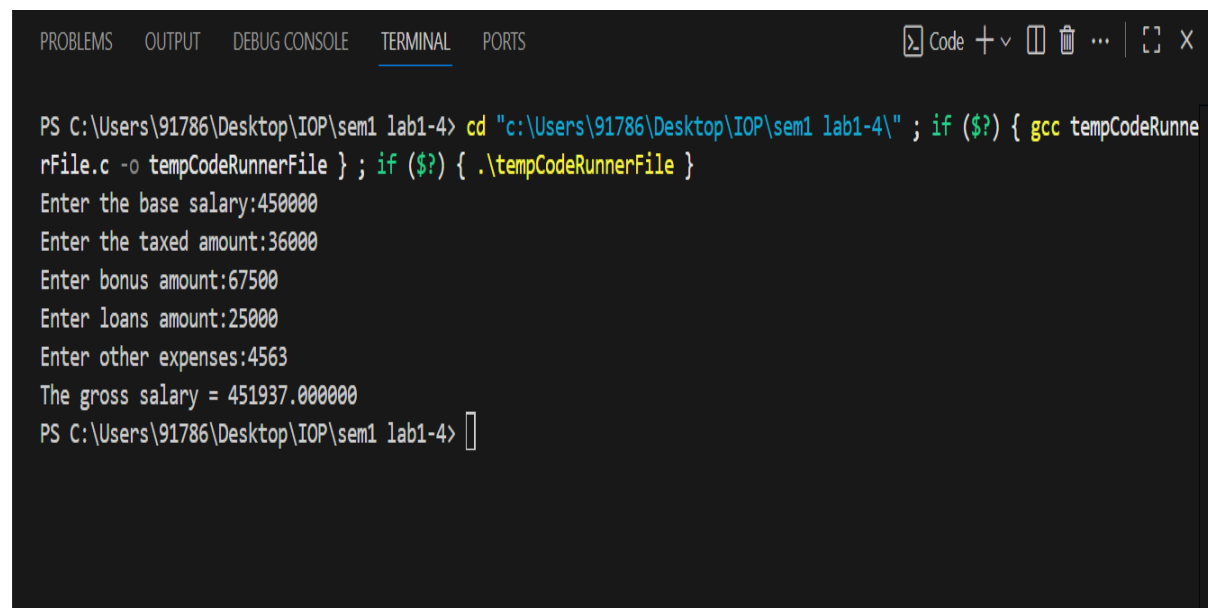
## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 3. PROGRAM TO CALCULATE GROSS SALARY

```
// TO CALCULATE GROSS SALARY
// code by sneha A52
#include<stdio.h>
int main()
{
    float salary,tax,other,bonus,loan,final_salary;
    printf("Enter the base salary:");
    scanf("%f",&salary);
    printf("Enter the taxed amount:");
    scanf("%f",&tax);
    printf("Enter bonus amount:");
    scanf("%f",&bonus);
    printf("Enter loans amount:");
    scanf("%f",&loan);
    printf("Enter other expenses:");
    scanf("%f",&other);
    final_salary=salary-tax+bonus-loan-other;

    printf("The gross salary = %f",final_salary);
}
```

Result:



The screenshot shows a terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the base salary:450000
Enter the taxed amount:36000
Enter bonus amount:67500
Enter loans amount:25000
Enter other expenses:4563
The gross salary = 451937.000000
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 4. PROGRAM TO CONVERT TEMPERATURE FROM FAHRENHEIT TO CENTIGRADE DEGREES.

```
//TO CONVERT TEMPERATURE FROM FAHRENHEIT TO CENTIGRADE DEGREES
//code by sneha A52
#include<stdio.h>
int main()
{
    float temp1,temp2;
    printf("To convert temp from fahrenheit to celcius");
    printf("\nEnter the temperature in fahrenheit:");
    scanf("%f",&temp1);
    temp2=(temp1-32)/1.8;
    printf("The temperature in celcius:%f",temp2,"*C");
    return 0;
}
```

Result:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_114.c -o IOP_114 } ; if ($?) { .\IOP_114 }
To convert temp from fahrenheit to celcius
Enter the temperature in fahrenheit:32.56
The temperature in celcius:0.311112
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 5. PROGRAM TO SWAP TWO VARIABLES USING THIRD VARIABLE

```
//TO SWAP TWO VARIABLES USING THIRD VARIABLE.  
//code by sneha A52  
#include<stdio.h>  
int main()  
{  
    int v1,v2,v3;  
    printf("Enter variable 1");  
    scanf("%d",&v1);  
    printf("Enter variable 2");  
    scanf("%d",&v2);  
    v3=v1;  
    v1=v2;  
    v2=v3;  
    printf("first number=%d\nsecond variable=%d",v1,v2);  
    return 0;  
}
```

Result:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne  
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }  
Enter variable 1 78  
Enter variable 2 55  
first number=55  
second variable=78  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 6. PROGRAM TO SWAP TWO VARIABLES WITHOUT USING THIRD VARIABLE.

```
//TO SWAP TWO VARIABLES WITHOUT USING THIRD VARIABLE.  
//Code by sneha A52  
#include<stdio.h>  
int main()  
{  
    int v1,v2;  
    printf("Enter variable 1:");  
    scanf("%d",&v1);  
    printf("Enter variable 2:");  
    scanf("%d",&v2);  
    v1=v1+v2;  
    v2=v1-v2;  
    v1=v1-v2;  
    printf("number 1:%d\nnumber 2:%d",v1,v2);  
    return 0;  
}
```

### Result:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
Code + v [icon] [icon] [icon] [icon] X  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne  
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }  
Enter variable 1:67  
Enter variable 2:55  
number 1:55  
number 2:67  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> [ ]
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 7. PROGRAM TO CALCULATE AREA OF A TRIANGLE.

```
//TO CALCULATE AREA OF A TRIANGLE.
//CODE by sneha A52
#include<stdio.h>
#include<math.h>
int main()
{
    float s1,s2,s3,s,area;
    printf("To calculate area of triangle using sides\nEnter length of side 1:");
    scanf("%f",&s1);
    printf("Enter length of side 2:");
    scanf("%f",&s2);
    printf("Enter length of side 3:");
    scanf("%f",&s3);
    s=(s1+s2+s3)/2;
    area=pow((s*(s-s1)*(s-s2)*(s-s3)),0.5);
    printf("The area of triangle is:%f",area);
    return 0;
}
```

### Result:



The screenshot shows a terminal window with the following content:

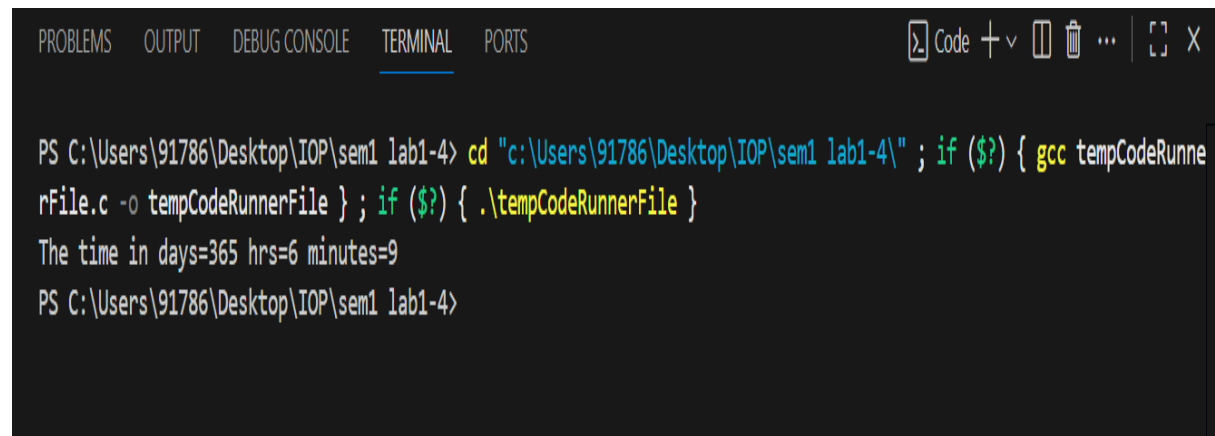
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
To calculate area of triangle using sides
Enter length of side 1:25
Enter length of side 2:45
Enter length of side 3:66
The area of triangle is:366.747864
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

8. EARTH TAKES A PERIOD OF REVOLUTION OF 31558150 SECONDS  
.WRITE A C PROGRAM TO CONVERT THIS INTO NUMBER OF DAY,HOURS  
AND MINUTES

```
/*31558150 SECONDS TO CONVERT THIS INTO NUMBER OF DAY,HOURS AND MINUTES  
written by sneha a52*/  
#include<stdio.h>  
int main()  
{  
    int day,hr,minutes,time=31558150;  
    day=time/(60*60*24);  
    hr=(time%(60*60*24))/(60*60);  
    minutes=((time%(60*60*24))%(60*60))/60;  
    printf("The time in days=%d hrs=%d minutes=%d",day,hr,minutes);  
}
```

Result:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Code +v [ ] [ ] ... [ ] X  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne  
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }  
The time in days=365 hrs=6 minutes=9  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4>
```



## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

9. PROGRAM TO READ TIME IN HR,MIN,SEC AND CONVERT IT INTO TOTAL SECOND.

```
//TO READ TIME IN HR,MIN,SEC AND CONVERT IT INTO TOTAL SECOND
// WRITTEN BY sneha A52
#include<stdio.h>
int main()
{
    int hr,min,sec,total_time;
    printf("Enter the number of hrs:");
    scanf("%d",&hr);
    printf("Enter the number of minutes:");
    scanf("%d",&min);
    printf("Enter the number of seconds:");
    scanf("%d",&sec);
    total_time=(hr*60*60)+(min*60)+sec;
    printf("The total time in seconds:%d",total_time);
}
```

Result:



The screenshot shows a Windows terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc tempCodeRunne
rFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the number of hrs:14
Enter the number of minutes:45
Enter the number of seconds:56
The total time in seconds:53156
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

10. WRITE A C PROGRAM TO CALCULATE THE CUT OFF MARK OF A STUDENT USING THE FORMULA.

$$CM = M/2 + P/2 + C/2 + E$$

WHERE CM = Cut of f mark

M = Marks in Mathematics out of 200

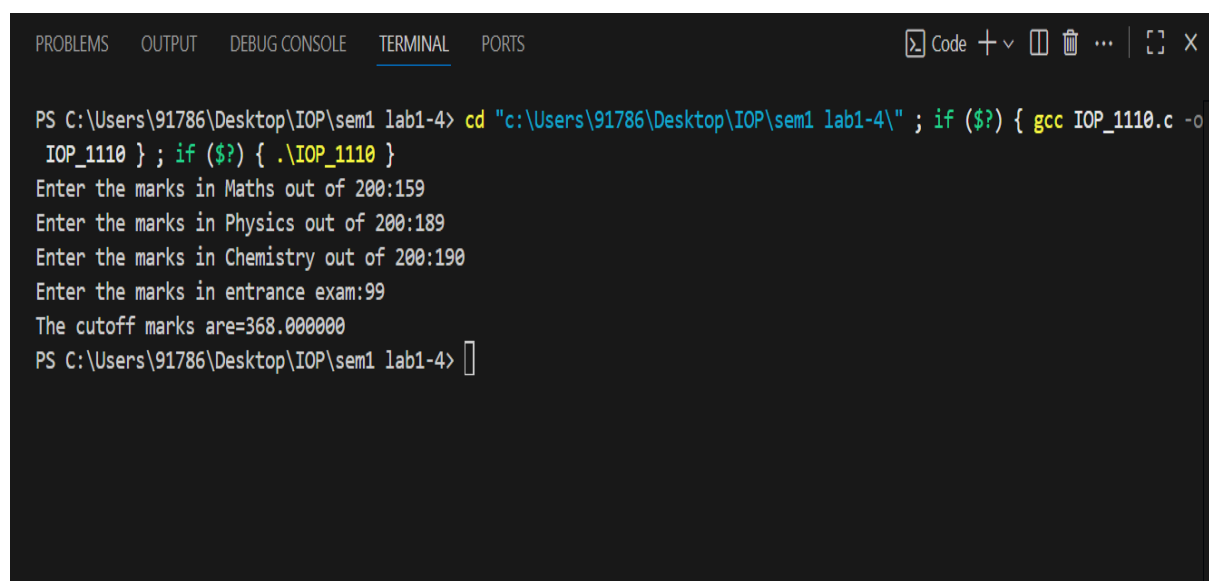
P = Marks in Physics out of 200

C = Marks in Chemistry out of 200

E = Marks in entrance examination out of 100

```
//TO CALCULATE THE CUT OFF MARK OF A STUDENT USING THE
// written by Sneha A52
#include<stdio.h>
int main()
{
    float M,P,C,E,CM;
    printf("Enter the marks in Maths out of 200:");
    scanf("%f",&M);
    printf("Enter the marks in Physics out of 200:");
    scanf("%f",&P);
    printf("Enter the marks in Chemistry out of 200:");
    scanf("%f",&C);
    printf("Enter the marks in entrance exam:");
    scanf("%f",&E);
    CM = M/2+P/2+C/2+E;
    printf("The cutoff marks are=%f",CM);
}
```

Result:



The screenshot shows a terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1110.c -o IOP_1110 } ; if ($?) { .\IOP_1110 }
Enter the marks in Maths out of 200:159
Enter the marks in Physics out of 200:189
Enter the marks in Chemistry out of 200:190
Enter the marks in entrance exam:99
The cutoff marks are=368.000000
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 11. PROGRAM TO READ TOTAL SECOND AND CONVERT IT INTO TIME.

```
//PROGRAM TO READ TOTAL SECOND AND CONVERT IT INTO TIME.  
//BT SNEHA A52  
#include<stdio.h>  
int main()  
{  
    int total,sec,hr,min;  
    printf("Enter the number of seconds passed in day");  
    scanf("%d",&total);  
    hr=total/(60*60);  
    min=(total%(60*60))/60;  
    sec=((total%(60*60))%60);  
    printf("The time of the day is hr:min:sec =%d:%d:%d",hr,min,sec);  
}
```

### Result:



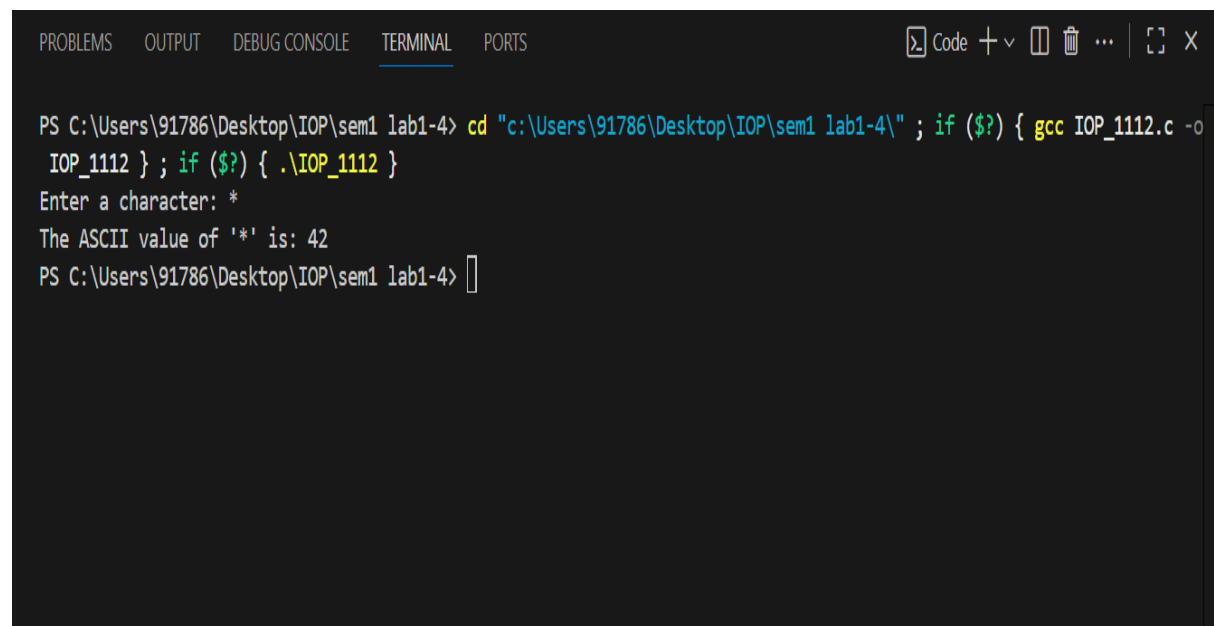
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1111.c -o  
IOP_1111 } ; if ($?) { .\IOP_1111 }  
Enter the number of seconds passed in day  
4536  
The time of the day is hr:min:sec =1:15:36  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 12. PROGRAM TO PRINT ASCII CODE OF ANY CHARACTER.

```
//TO PRINT ASCII CODE OF ANY CHARACTER.  
// WRITTEN BY SNEHA A52  
#include<stdio.h>  
int main()  
{  
    char c;  
    printf("Enter a character: ");  
    scanf("%c",&c);  
    printf("The ASCII value of '%c' is: %d",c,c);  
    return 0;  
}
```

Result:



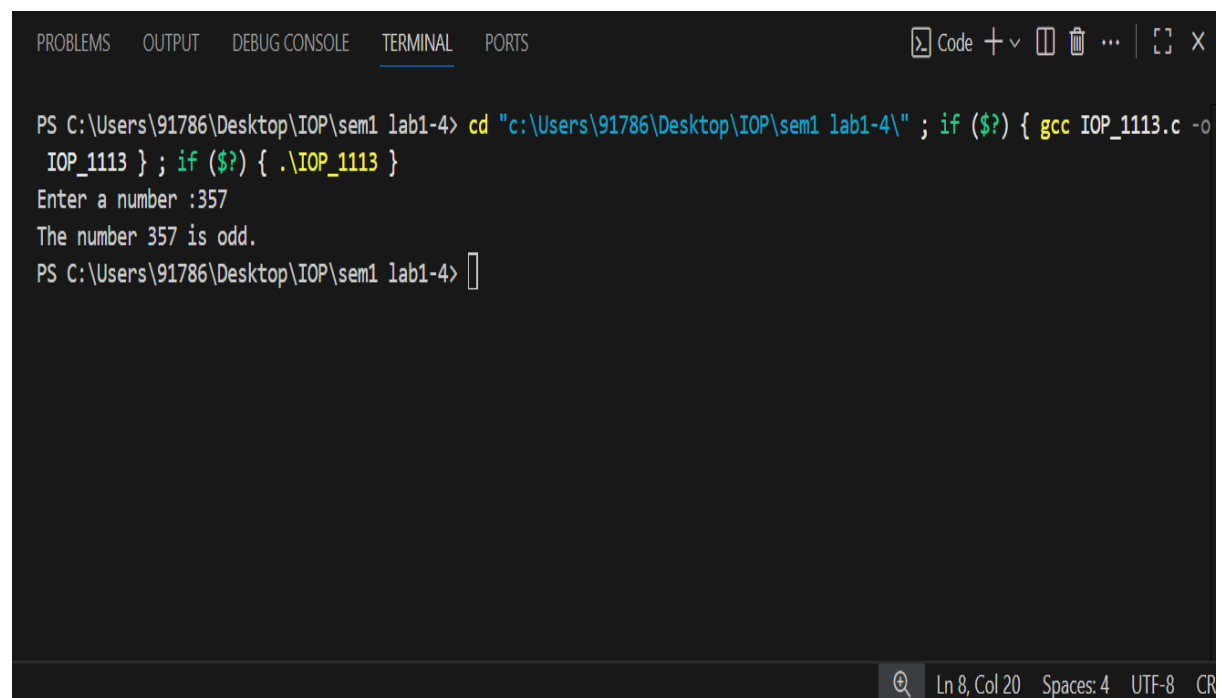
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1112.c -o  
IOP_1112 } ; if ($?) { .\IOP_1112 }  
Enter a character: *  
The ASCII value of '*' is: 42  
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 13. PROGRAM TO CHECK WHETHER A NO. IS EVEN OR ODD.

```
//To check whether the number is odd or even
// written by sneha A52
#include<stdio.h>
int main()
{
    int a;
    printf("Enter a number :");
    scanf("%d",&a);
    if(a%2==0)
        printf("The number %d is even.",a);
    else
        printf("The number %d is odd.",a);
    return 0;
}
```

### Result:



The screenshot shows a Windows terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1113.c -o IOP_1113 } ; if ($?) { .\IOP_1113 }
Enter a number :357
The number 357 is odd.
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

The terminal window has a dark background with light-colored text. The top bar shows tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The bottom status bar shows the cursor position (Ln 8, Col 20), the number of spaces (4), the encoding (UTF-8), and the character set (CR).

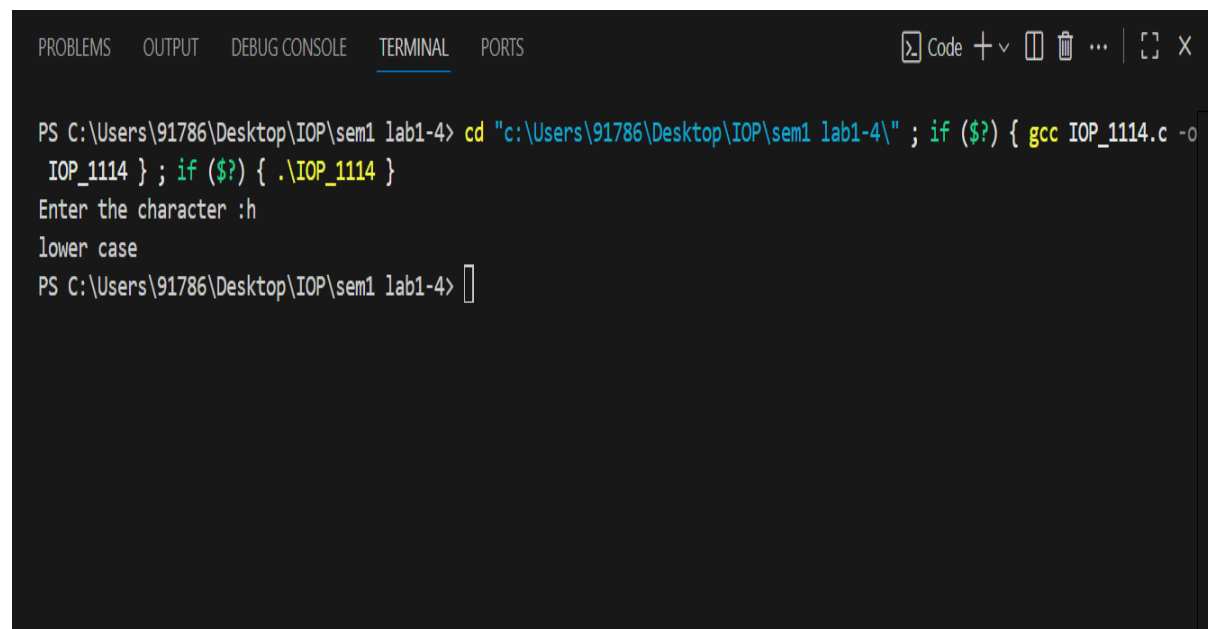
## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

14. PROGRAM TO CHECK WHETHER A GIVEN CHARACTER IS CAPITAL, LETTER, SMALL CASE LETTER, A DIGIT OR A SPECIAL SYMBOL.

```
//To check whether the given character is capital,small,digit or symbol
// by sneha A52
#include<stdio.h>
int main()
{
    char c;
    printf("Enter the character :");
    scanf("%c",&c);

    if(c>=65 && c<=90)
        printf("Upper case");
    else if(c>=97 && c<=122)
        printf("lower case");
    else if(c>=48 && c<=57)
        printf("Digit");
    else
        printf("symbol");
    return 0;
}
```

Result:



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
Code + v  [icon] [icon] ... [icon] X

PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1114.c -o
IOP_1114 } ; if ($?) { .\IOP_1114 }
Enter the character :h
lower case
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> [ ]
```

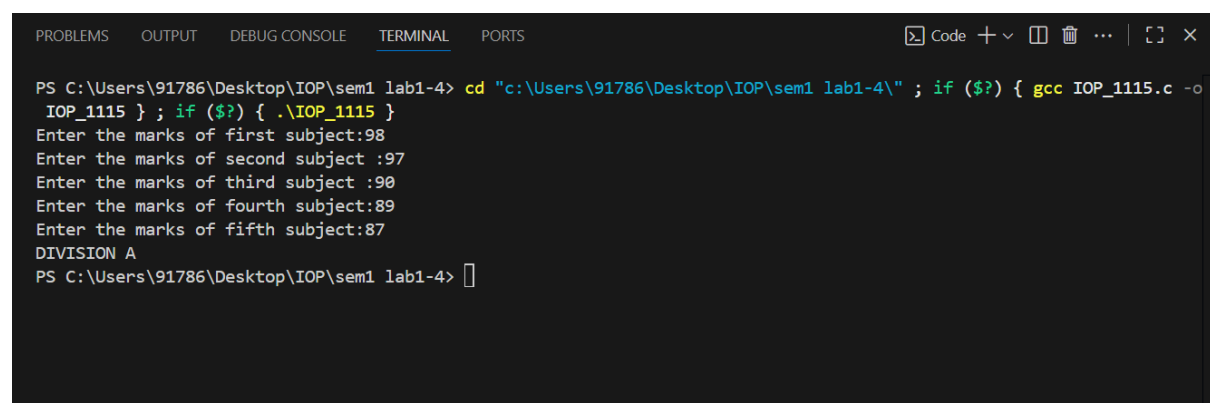
## IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

### 15. PROGRAM TO READ MARKS OF FIVE SUBJECT AND PRINT DIVISION.

```
//TO READ MARKS OF FIVE SUBJECT AND PRINT DIVISION.
//BY SNEHA A52
#include<stdio.h>
int main()
{
    int s1,s2,s3,s4,s5;
    float total;
    printf("Enter the marks of first subject:");
    scanf("%d",&s1);
    printf("Enter the marks of second subject :");
    scanf("%d",&s2);
    printf("Enter the marks of third subject :");
    scanf("%d",&s3);
    printf("Enter the marks of fourth subject:");
    scanf("%d",&s4);
    printf("Enter the marks of fifth subject:");
    scanf("%d",&s5);
    total=(s1+s2+s3+s4+s5)/5;

    if(total>=90)
        printf("DIVISION A");
    else if(total>=75)
        printf("DIVISION B");
    else if(total>=55)
        printf("DIVISION C");
    else if(total>=35)
        printf("DIVISION D");
    else
        printf("DIVISION E");
    return 0;
}
```

### Result:



```
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> cd "c:\Users\91786\Desktop\IOP\sem1 lab1-4\" ; if ($?) { gcc IOP_1115.c -o IOP_1115 } ; if ($?) { .\IOP_1115 }
Enter the marks of first subject:98
Enter the marks of second subject :97
Enter the marks of third subject :90
Enter the marks of fourth subject:89
Enter the marks of fifth subject:87
DIVISION A
PS C:\Users\91786\Desktop\IOP\sem1 lab1-4> 
```

