IOP LAB-1 PRACTICAL – SNEHA CHORARIA [A52]

1. PROGRAM TO CALCULATE SIMPLE INTEREST.

```c
// 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>
```

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

```c
//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>
```

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3. PROGRAM TO CALCULATE GROSS SALARY

```c
// 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:

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

```c
//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:

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5. PROGRAM TO SWAP TOW VARIABLES USING THIRD VARIABLE

```c
//TO SWAP TOW 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:

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

```c
//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:

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7. PROGRAM TO CALCULATE AREA OF A TRIANGLE.

```c
//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:

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

```c
/*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:

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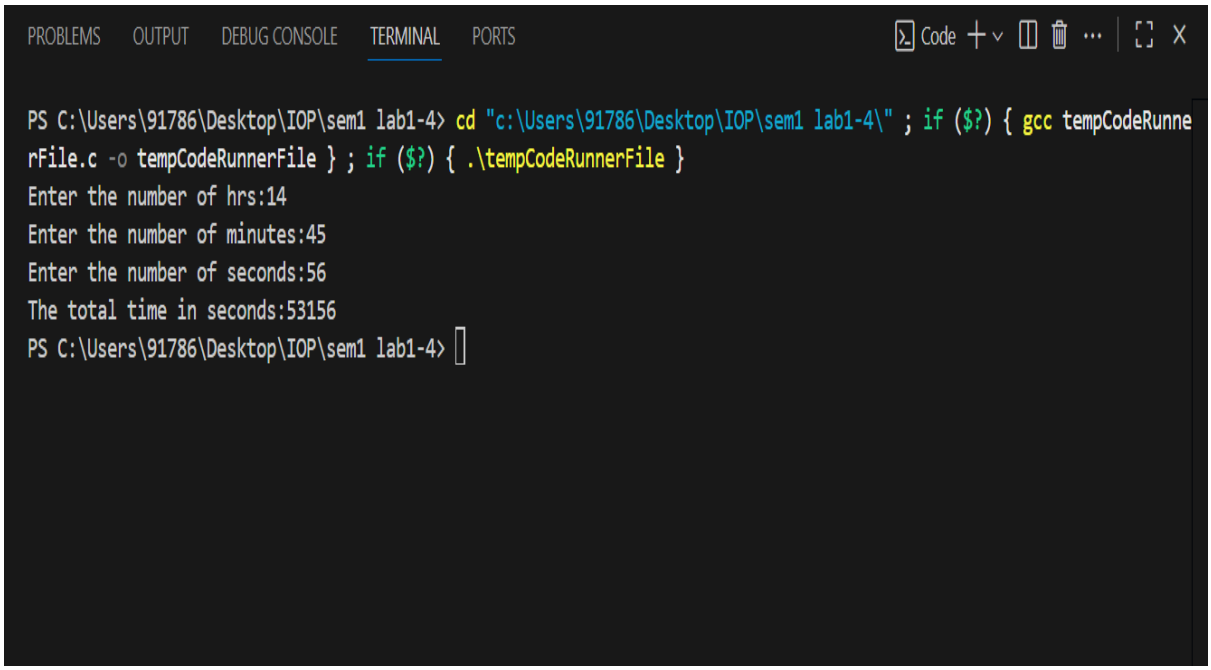
9. PROGRAM TO READ TIME IN HR,MIN,SEC AND CONVERT IT INTO TOTAL SECOND.

```c
//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:



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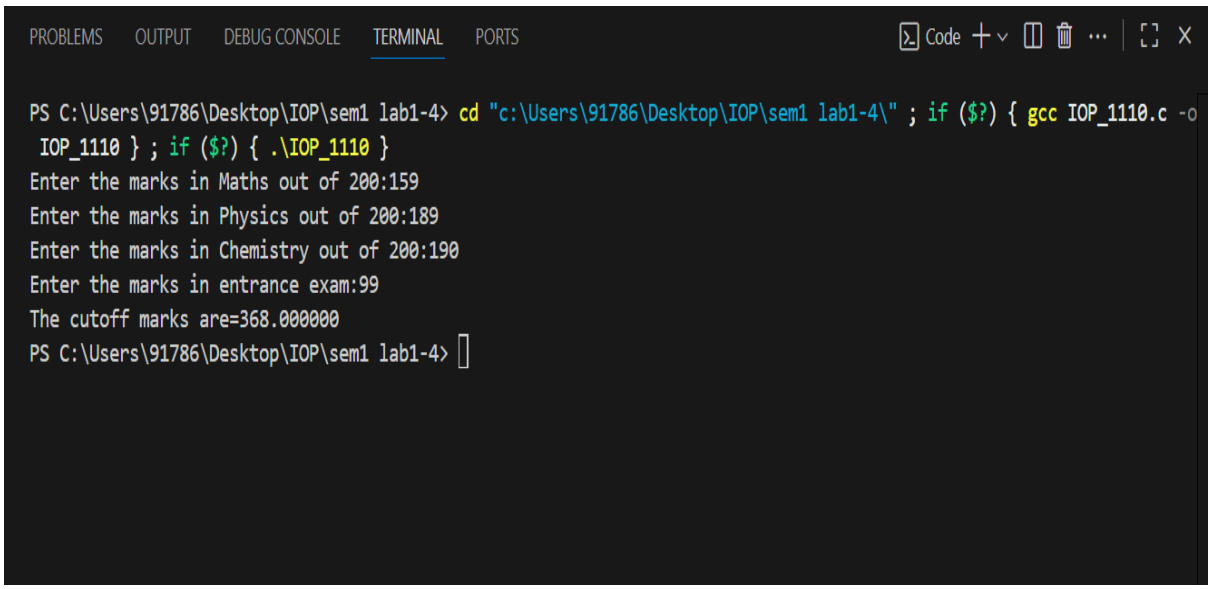
10. WRITE A C PROGRAM TO CALCULATE THE CUT OFF MARK OF A STUDENT USING THE
FORMULA.
CM = M/2+P/2+C/2+E
WHERE CM = Cut of f mark
M = Marks in Mathematics out of 200
P = Marks in Physics out of 200
C = Marks in Chemistry out of 200
E = Marks in entrance examination out of 100

```c
//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:



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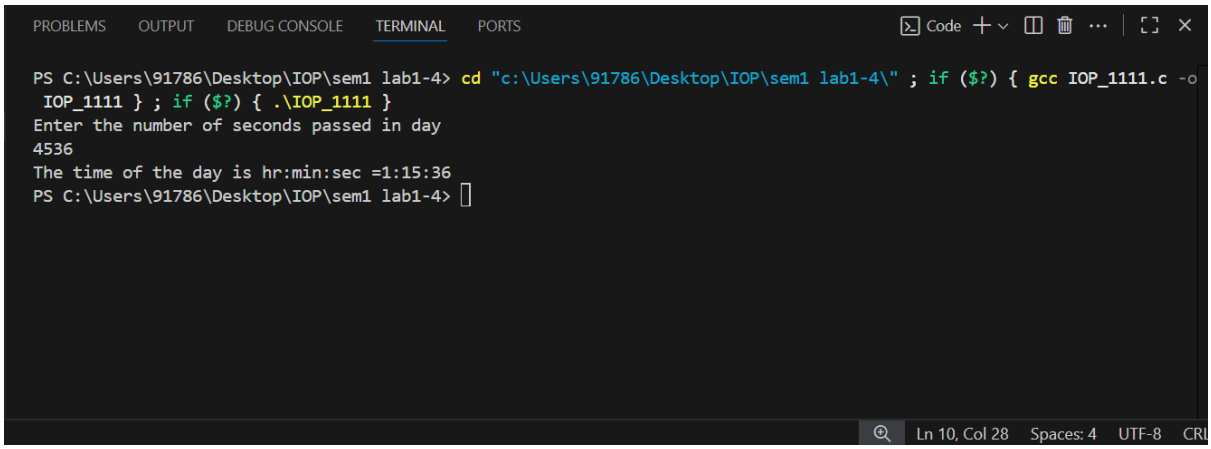
11. PROGRAM TO READ TOTAL SECOND AND CONVERT IT INTO TIME.

```c
//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:



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12. PROGRAM TO PRINT ASCII CODE OF ANY CHARACTER.

```c
//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:

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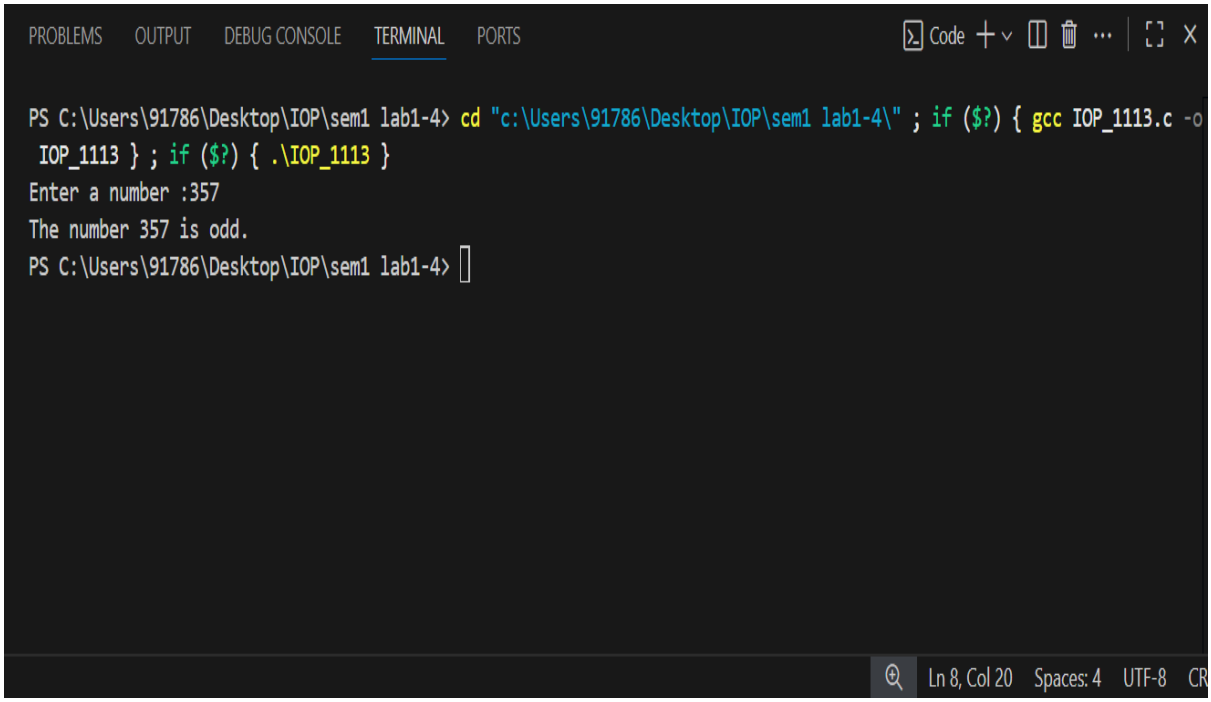
13. PROGRAM TO CHECK WHETHER A NO. IS EVEN OR ODD.

```c
//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:



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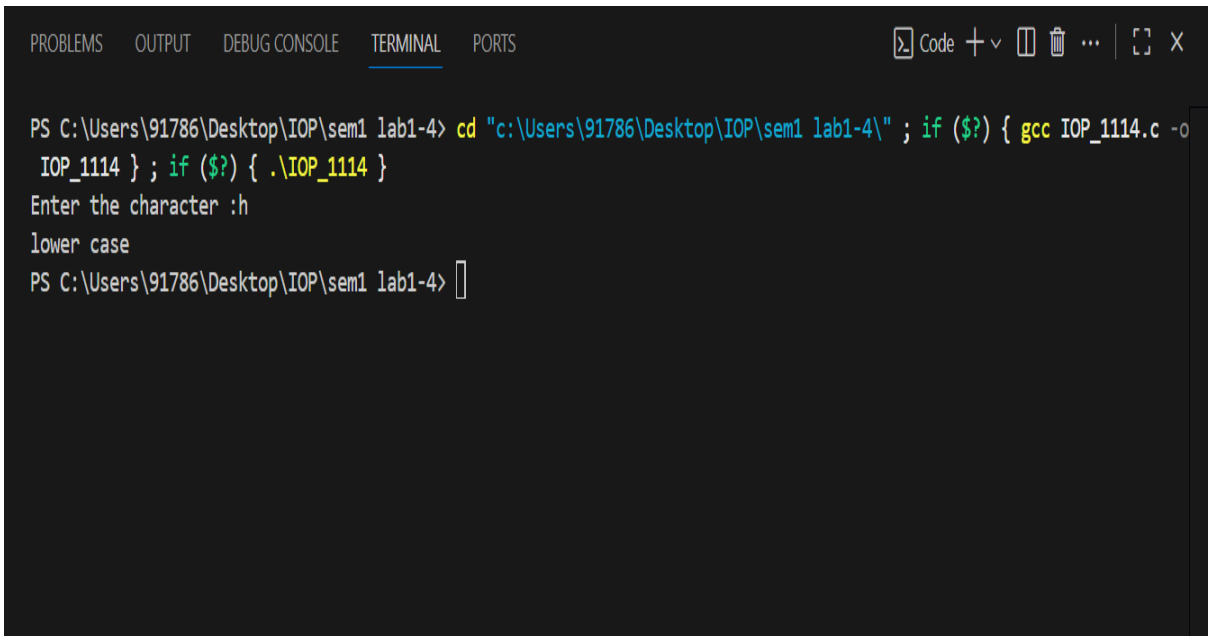
14. PROGRAM TO CHECK WHETHER A GIVEN CHARACTER IS CAPITAL, LETTER, SMALL CASE LETTER, A DIGIT OR A SPECIAL SYMBOL.

```c
//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:



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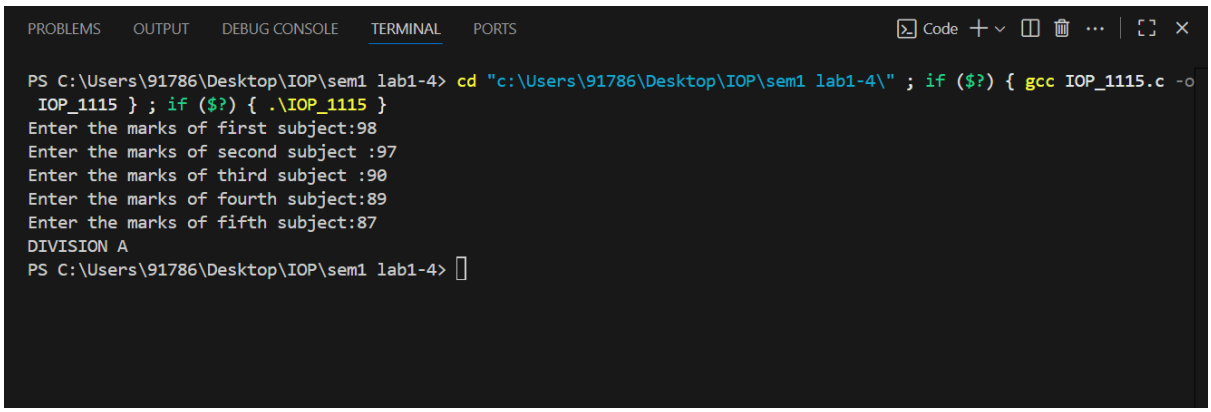
15. PROGRAM TO READ MARKS OF FIVE SUBJECT AND PRINT DIVISION.

```c
//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:



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