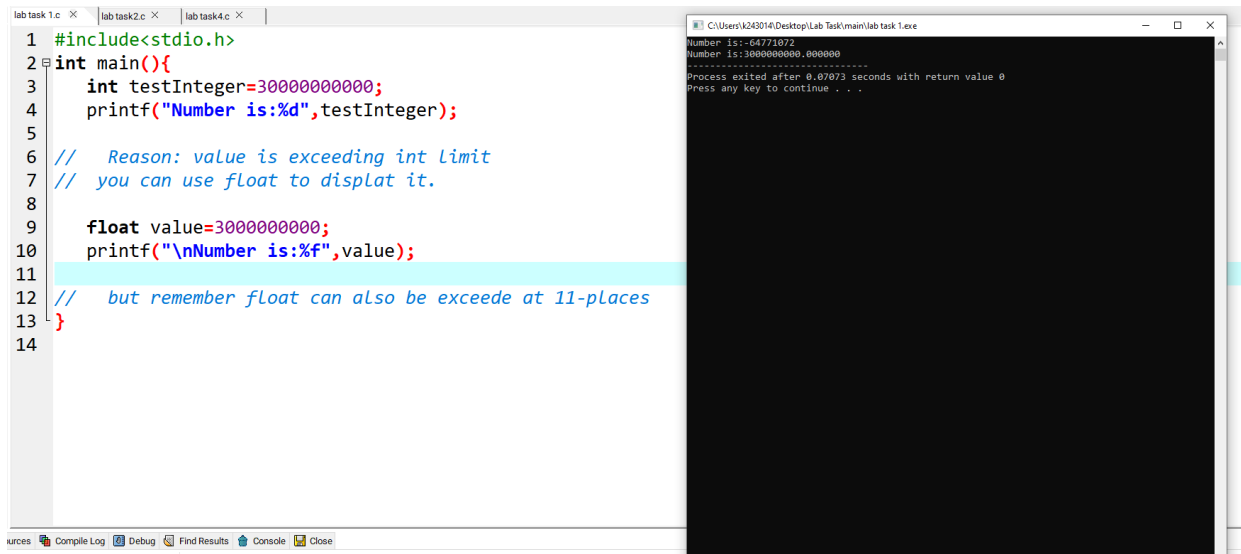


# Lab Submission # 3:

## Question # 1:

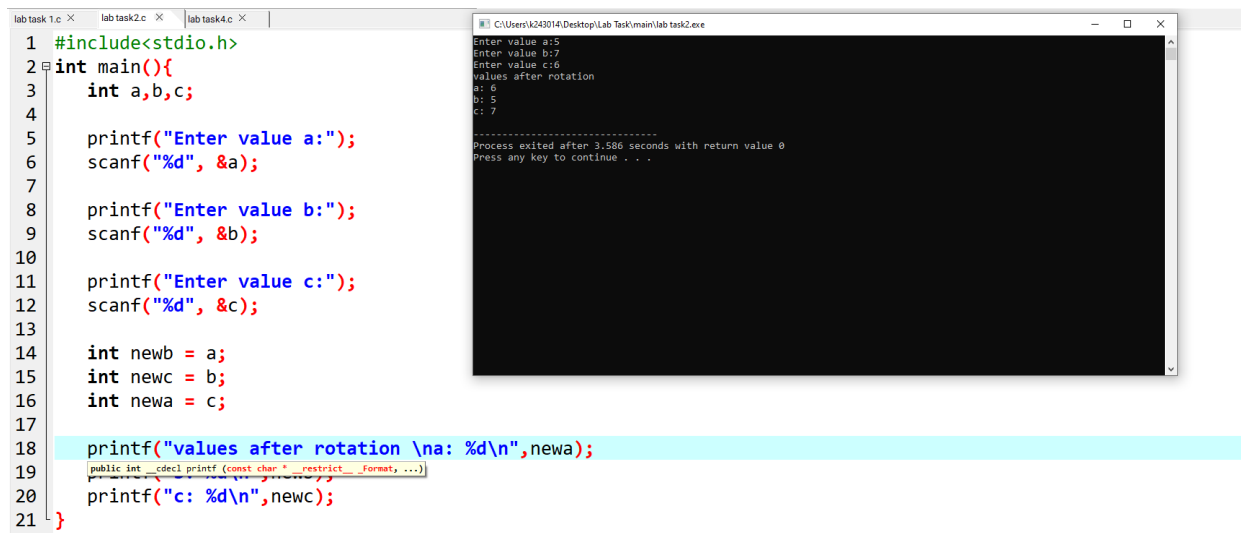


The screenshot shows a C program in a code editor and its execution output in a console window. The code defines an integer variable and a float variable, both initialized with the value 3000000000. The integer variable is printed using %d, and the float variable is printed using %f. The output shows the integer value as 3000000000 and the float value as 3000000000.000000.

```
1 #include<stdio.h>
2 int main(){
3     int testInteger=3000000000;
4     printf("Number is:%d",testInteger);
5
6     // Reason: value is exceeding int Limit
7     // you can use float to displat it.
8
9     float value=3000000000;
10    printf("\nNumber is:%f",value);
11
12    // but remember float can also be excede at 11-places
13 }
14
```

Number is: 3000000000  
Number is: 3000000000.000000  
Process exited after 0.07073 seconds with return value 0  
Press any key to continue . . .

## Question # 2:

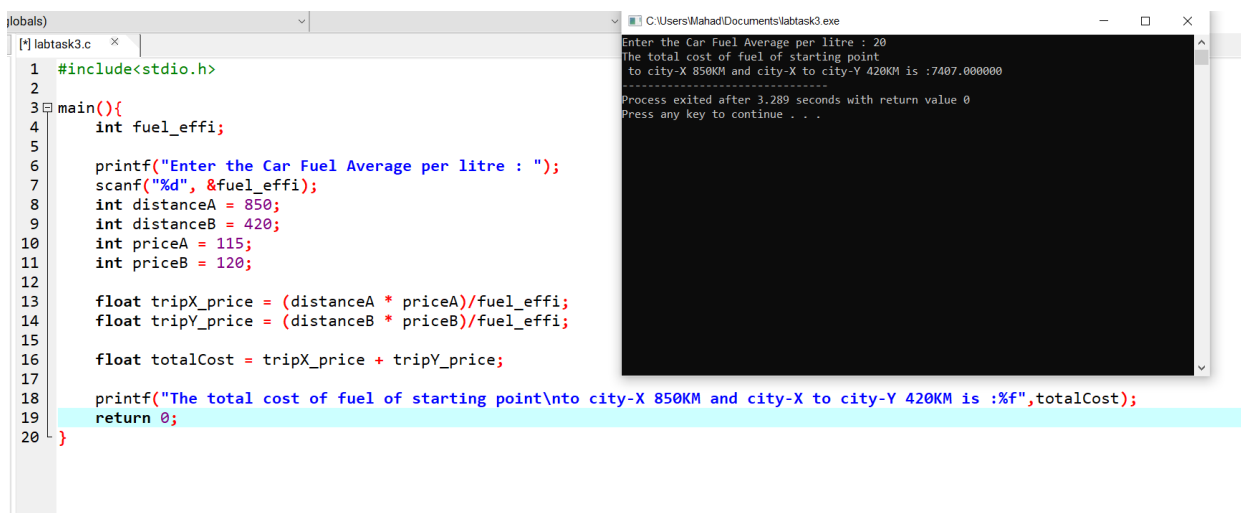


The screenshot shows a C program in a code editor and its execution output in a console window. The code defines three integer variables (a, b, c) and their rotated values (newa, newb, newc). The values are printed before and after rotation. The output shows the values of a, b, c and their rotated values newa, newb, newc.

```
1 #include<stdio.h>
2 int main(){
3     int a,b,c;
4
5     printf("Enter value a:");
6     scanf("%d", &a);
7
8     printf("Enter value b:");
9     scanf("%d", &b);
10
11    printf("Enter value c:");
12    scanf("%d", &c);
13
14    int newb = a;
15    int newc = b;
16    int newa = c;
17
18    printf("values after rotation \na: %d\n",newa);
19    printf("b: %d\n",newb);
20    printf("c: %d\n",newc);
21 }
```

Enter value a:5  
Enter value b:7  
Enter value c:6  
values after rotation  
a: 6  
b: 5  
c: 7  
Process exited after 3.586 seconds with return value 0  
Press any key to continue . . .

## Question # 3



The screenshot shows a C program in a code editor and its execution output in a console window. The code calculates the total cost of fuel for a car trip. It takes the fuel efficiency, distance to city X, and distance to city Y as input. The output shows the total cost of fuel for the trip.

```
1 #include<stdio.h>
2
3 main(){
4     int fuel_effi;
5
6     printf("Enter the Car Fuel Average per litre : ");
7     scanf("%d", &fuel_effi);
8     int distanceA = 850;
9     int distanceB = 420;
10    int priceA = 115;
11    int priceB = 120;
12
13    float tripX_price = (distanceA * priceA)/fuel_effi;
14    float tripY_price = (distanceB * priceB)/fuel_effi;
15
16    float totalCost = tripX_price + tripY_price;
17
18    printf("The total cost of fuel of starting point\nto city-X 850KM and city-X to city-Y 420KM is :%f",totalCost);
19    return 0;
20 }
```

Enter the Car Fuel Average per litre : 20  
The total cost of fuel of starting point  
to city-X 850KM and city-X to city-Y 420KM is :7407.000000  
Process exited after 3.289 seconds with return value 0  
Press any key to continue . . .

## Question # 4:

```
lab task 1.c x lab task2.c x lab task4.c x
1 #include<stdio.h>
2
3 int main(){
4     int xa,xb,ya,yb,chngey,chngey;
5     float slope;
6     printf("Enter x1 value :");
7     scanf("%d",&xa);
8     printf("Enter x2 value :");
9     scanf("%d",&xb);
10    printf("Enter y1 value :");
11    scanf("%d",&ya);
12    printf("Enter y2 value :");
13    scanf("%d",&yb);
14
15    chngey = yb-ya;
16    chngey = xb-xa;
17    slope = chngey/chngey;
18    // float slope = (y2-y1)/(x2-x1);
19    printf("slope is: %f",slope);
20 }
```

```
C:\Users\k342014\Desktop\Lab Task\main\lab task4.exe
Enter x1 value :2
Enter x2 value :4
Enter y1 value :8
Enter y2 value :6
slope is: -1.000000
Process exited after 3.894 seconds with return value 0
Press any key to continue . . .
```

## Question # 5:

```
labtask3.c x labtask5.c x
1 #include<stdio.h>
2
3 main(){
4     int principal;
5     float rate;
6     printf("please Enter the Principle/Deposit: ");
7     scanf("%d", &principal);
8     printf("please Enter annual rate(Annual rate should be between 1-100) : ");
9     scanf("%f", &rate);
10
11    rate = rate/100;
12    int interest = principal*rate;
13    printf("This is annual interest : %d", interest);
14
15    int totalAmount = principal + interest;
16    printf("\nThis is the total amount over the year: %d", totalAmount);
17
18 }
```

```
C:\Users\Mahad\Documents\labtask5.exe
please Enter the Principle/Deposit: 20000
please Enter annual rate(Annual rate should be between 1-100) : 20
This is annual interest : 4000
This is the total amount over the year: 24000
Process exited after 4.033 seconds with return value 0
Press any key to continue . . .
```

