Atta Lab 3

Q1) The number is very large, so the variable type should be long integer (%ld) for the code to work.

Q2)

| main.c | | | Share | Run | Output |

```
1   // Online C compiler to run C program online
2   #include <stdio.h>
3
4 - int main() {
5       int No1, No2, swap;
6       printf("Enter Number 1:");
7       scanf("%d", &No1);
8       printf("Enter Number 2:");
9       scanf("%d", &No2);
10      swap = No1;
11      No1 = No2;
12      No2 = swap;
13      printf("Number 1 is %d, Number 2 is %d", No1, No2);
14 |
15      return 0;
16  }
```

```
/tmp/3lQjVzpDD1.o
Enter Number 1:6
Enter Number 2:7
Number 1 is 7, Number 2 is 6

=== Code Execution Successful ===
```

Q3)

```c
1   // Online C compiler to run C program online
2   #include <stdio.h>
3
4   int main() {
5       float salary, taxrate, tax, incomeleft;
6       printf("Enter Salary:");
7       scanf("%f", &salary);
8       printf("Enter Tax Rate(in %):");
9       scanf("%f", &taxrate);
10
11      tax = (taxrate*salary)/100;
12      incomeleft = salary-tax;
13      printf("Tax you have to pay: %.2f", tax);
14      printf("\nYour income left is: %.2f", incomeleft);
15
16
17      return 0;
18  }
```

Output

```
/tmp/kZotG5bbxI.o
Enter Salary:1000
Enter Tax Rate(in %):10
Tax you have to pay: 100.00
Your income left is: 900.00

=== Code Execution Successful ===
```

Q4)

```c
// Online C compiler to run C program online
#include <stdio.h>

int main() {
    int distance = 1207;
    int fuelavg1 = 118;
    int fuelavg2 = 123;
    float average, totalfuel, fuelcost1, fuelcost2;
    printf("Enter fuel average:");
    scanf("%f", &average);

    if (average>0) {
        totalfuel = (distance/average)*2;
        fuelcost1 = (totalfuel/2)*fuelavg1;
        fuelcost2 = (totalfuel/2)*fuelavg2;

        printf("\nTotal fuel consumed: %.2f", totalfuel);
        printf("\nForward Fuel Cost: %.2f", fuelcost1);
        printf("\nBackward Fuel Cost: %.2f", fuelcost2);
    } else {
        printf("Invalid Input");
    }
}
```

Output

```
/tmp/WwxRoZ6s2s.o
Enter fuel average:12

Total fuel consumed: 201.17
Forward Fuel Cost: 11868.83
Backward Fuel Cost: 12371.75

=== Code Execution Successful ===
```

Q5)

```c
1   // Online C compiler to run C program online
2   #include <stdio.h>
3
4   int main() {
5       float principal, rate, time, Interest;
6       printf("Enter Principal Amount (b/w Rs.100-1,000,000): ");
7       scanf("%f", &principal);
8
9       if (principal>=100 && principal<=1000000) {
10          printf("Enter Interest Rate (b/w 5-10%):  ");
11          scanf("%f", &rate);
12
13          if (rate>=5 && rate<=10) {
14              printf("Enter Time Period (b/w 1-10 years): ");
15              scanf("%f", &time);
16
17              if (time>=1 && time<=10) {
18                  Interest = (principal*rate*time)/100;
19                  printf("Your Interest: %.2f", Interest);
20              } else { printf("Invalid Input"); }
21          } else { printf("Invalid Input"); }
22      } else { printf("Invalid Input"); }
```

Output

```
/tmp/KGw4bcWMdg.o
Enter Principal Amount (b/w Rs.100-1,000,000): 1500
Enter Interest Rate (b/w 5-10%):  7
Enter Time Period (b/w 1-10 years): 2
Your Interest: 210.00

=== Code Execution Successful ===
```

Q6)

```c
1   // Online C compiler to run C program online
2   #include <stdio.h>
3
4   int main() {
5       int x1 =5, y1 = 4, x2= 3, y2 =2;
6       int changeinY, changeinX;
7       float Gradient;
8
9       changeinY = y2-y1;
10      changeinX = x2-x1;
11      Gradient = changeinY/changeinX;
12
13      printf("Gradient = %.3f", Gradient);
14
15
16      return 0;
17  }
```

Output

/tmp/IQbAM9ELSr.o
Gradient = 1.000

=== Code Execution Successful ===