

## Practical Lab 02

1. Write a C program that takes two integer values as input from the user. Then swap the values taken from the user and display the output of the variables.

```
#include<stdio.h>
#include<conio.h>
int main()
{
    int n1, n2;

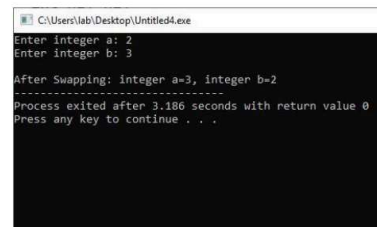
    printf("Enter integer a: ");
    scanf("%d", &n1);

    printf("Enter integer b: ");
    scanf("%d", &n2);

    int temp= n1;
    n1=n2;
    n2=temp;

    printf("\nAfter Swapping: integer a=%d, integer b=%d", n1,n2);
    return 0;

    getch;
}
```



```
C:\Users\lab\Desktop\Untitled4.exe
Enter integer a: 2
Enter integer b: 3
After Swapping: integer a=3, integer b=2
Process exited after 3.186 seconds with return value 0
Press any key to continue . . .
```

2. A customer asks the IT firm to develop a program in C language, which can take tax rate and salary from the user on runtime and then calculate the tax the user has to pay and the salary he/she will have after paying the tax. This information is then provided to the user.

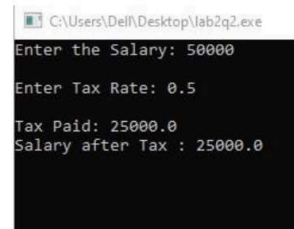
```
#include<stdio.h>
#include<conio.h>
int main()
{
    float salary, tax_paid, salary_left, tax_rate;
    printf("Enter the Salary: ");
    scanf("%f", &salary);

    printf("\nEnter Tax Rate: ");
    scanf("%f", &tax_rate);

    tax_paid= salary*tax_rate;
    salary_left = salary-tax_paid;

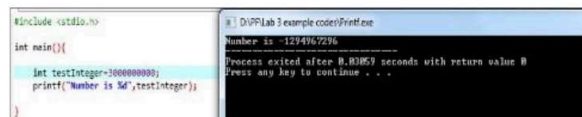
    printf("\nTax Paid: %.1f", tax_paid);
    printf("\nSalary after Tax : %.1f", salary_left);

    getch();
}
```



```
C:\Users\Del\Desktop\lab2q2.exe
Enter the Salary: 50000
Enter Tax Rate: 0.5
Tax Paid: 25000.0
Salary after Tax : 25000.0
```

3. Explain the output of this C program. Why is the wrong value being displayed in the output?



```
#include <stdio.h>

int main(){
    int testInteger=1000000000;
    printf("Number is %d",testInteger);
}
```

```
Number is -1294967296
Process exited after 0.03059 seconds with return value 0
Press any key to continue . . .
```

The output is displaying the wrong value because variables do not start with numbers. Also in variable declaration no value is assigned.

4. Construct a C program with the flowchart below. The input value of the Principle must be between 100 Rs. To 1,000,000 Rs. The Rate of interest must be between 5% to 10% and Time Period must be between 1 to 10 years. Hint: these restrictions can be displayed in the form of a message on the window.

```
#include<stdio.h>
#include<conio.h>
int main()
{
    int principal_amt, time_period;
    float rate, simple_interest;

    printf("Enter the Principal Amount between 100-1000000:");
    scanf("%d", &principal_amt);

    printf("\nEnter the Interest Rate between 0.05-0.10:");
    scanf("%f", &rate);

    printf("\nEnter the Time Period between 1-10 years:");
    scanf("%d", &time_period);

    simple_interest = principal_amt * rate * time_period;
    printf("\nSimple Interest: %.2f", simple_interest);

    getch();
}
```

```
Enter the Principal Amount between 100-1000000:1000
Enter the Interest Rate between 0.05-0.10:0.06
Enter the Time Period between 1-10 years:5
Simple Interest: 300.00
```