

Lab Assignment 1

Himanshu Gupta

1. Ramesh's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write a C Program to calculate gross salary.

```
#include <stdio.h>
int main()
{
    float grossSalary, rent = 20, baseSalary, dearness = 40;
    printf("Enter Base Salary\n");
    scanf("%f", &baseSalary);
    grossSalary = baseSalary * (1.00 + (dearness / 100) - (rent / 100));
    printf("The Gross Salary is: \n%2f", grossSalary);
}
```

\$ bin/1.o

Input:

Enter Base Salary
100

Output:

The Gross Salary is:
120.000000

2. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

```
#include <stdio.h>
int main()
{
    int aggMarks= 0;
    int temp , count = 0;
    printf("Enter Marks of each Subject\n");
    while (count != 5)
    {
        scanf("%d" , &temp);
        aggMarks+=temp;
        count++;
    }

    printf("Aggregate marks are: \n%d\nPercent Marks are: \n%0.2f" , aggMarks , count , (float)(aggMarks)*100/(count*100));
}
```

\$ bin/2.o

Input:

Enter Marks of each Subject
40
23
15
42
32

Output:

Aggregate marks are:
152
Percent Marks are:
30.40%

3. Temperature of a city in Fahrenheit degree is input through the keyboard. Write a C program to convert this temperature into Celsius.

```
#include <stdio.h>
int main()
{
    float inputFaren;
    scanf("%f", &inputFaren);
    printf("%.2f", (inputFaren - 32) * 5 / 9);
}
```

\$ bin/3.o

Input:

12

Output:

-11.11

4. Two numbers are input through the keyboard into two variables A and B. Write a C program to interchange the contents of A and B.

```
#include <stdio.h>
int main()
{
    int a , b , temp;
    scanf("%d%d" , &a , &b);
    //a = temp ; a = b ; b = temp;           //Method 1
    //a = a + b; b = a - b; a = a - b;       //Method 2
    a = a ^ b; b = a ^ b; a = a ^ b;       //Method 3
    printf("\n%d\n%d" , a , b);
}
```

\$ bin/4.o

Input:

12

32

Output:

32

12

```
#include <stdio.h>
int main()
{
    int num = 0;
    int sum = 0;
    scanf("%d", &num);
    while (num != 0)
    {
        sum += num % 10;
```

```
        num /= 10;
    }
    printf("\n%d", sum);
}
```

\$ bin/5.o

Input:

12345

Output:

15