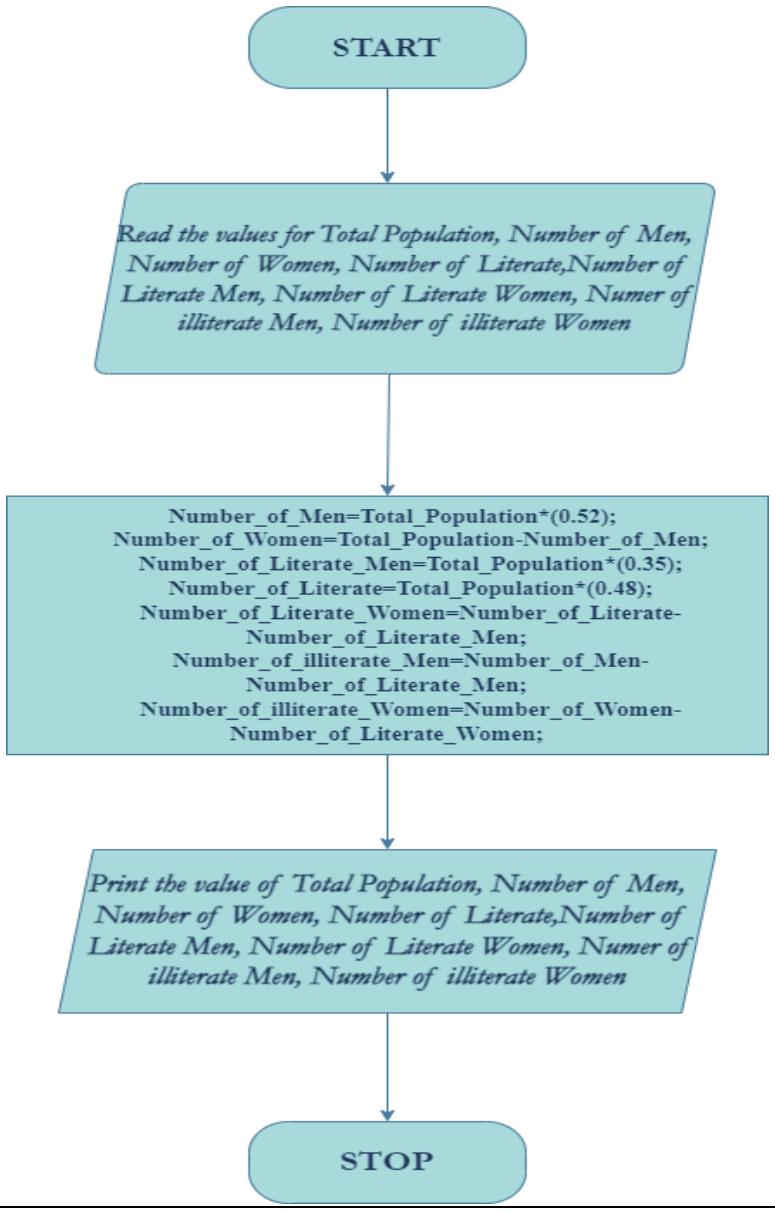
| | Practical 2 |
|---|---|
| **Program 2.1** | In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write a program to find the total number of illiterate men and women if the population of the town is 80,000. |
| **Flowchart** |   |
| **Algorithm** | Step 1: Start<br>Step 2: Read all the parameters found using total population.<br>Step 3: Using total population find all the parameters asked.<br>Step 4: Print all the parameters found using total population.<br>Step 5: Stop |

**Code**

```c
//This Program is Prepared by 23CS041_DHRUV_LOKADIYA/
#include<stdio.h>
int main()
{
        int Total_Population=80000,Number_of_Literate,Number_of_Men,Number_of_Literate_Men,
        Number_of_illiterate_Men,Number_of_Women,Number_of_Literate_Women,Number_of_illiterate_Women;

        Number_of_Men=Total_Population*(0.52);
        Number_of_Women=Total_Population-Number_of_Men;
        Number_of_Literate_Men=Total_Population*(0.35);
        Number_of_Literate=Total_Population*(0.48);
        Number_of_Literate_Women=Number_of_Literate-Number_of_Literate_Men;
        Number_of_illiterate_Men=Number_of_Men-Number_of_Literate_Men;
        Number_of_illiterate_Women=Number_of_Women-Number_of_Literate_Women;

        printf("\n Sr.No. \t Get Outcome \t\t\t  Value");
        printf("\n 1 \t Total_Population \t\t\t %d", Total_Population);
        printf("\n 2 \t Number_of_Literate \t\t\t %d", Number_of_Literate);
        printf("\n 3 \t Number_of_Men \t\t\t\t %d",  Number_of_Men);
        printf("\n 4 \t Number_of_Literate_Men \t\t %d", Number_of_Literate_Men);
        printf("\n 5 \t Number_of_illiterate_Men \t\t %d", Number_of_illiterate_Men);
        printf("\n 6 \t Number_of_Women \t\t\t %d", Number_of_Women);
        printf("\n 7 \t Number_of_Literate_Women \t\t %d", Number_of_Literate_Women);
        printf("\n 8 \t Number_of_illiterate_Women \t\t %d"int main::Number_of_Literate_Women
        printf("\n 23CS041_CS1");
        return 0;
}
```

**Output**

```
Sr.No.          Get Outcome                      Value
1       Total_Population                        80000
2       Number_of_Literate                      38400
3       Number_of_Men                           41600
4       Number_of_Literate_Men                  28000
5       Number_of_illiterate_Men                13600
6       Number_of_Women                         38400
7       Number_of_Literate_Women                10400
8       Number_of_illiterate_Women              28000
23CS041_CS1
```

**Questions**

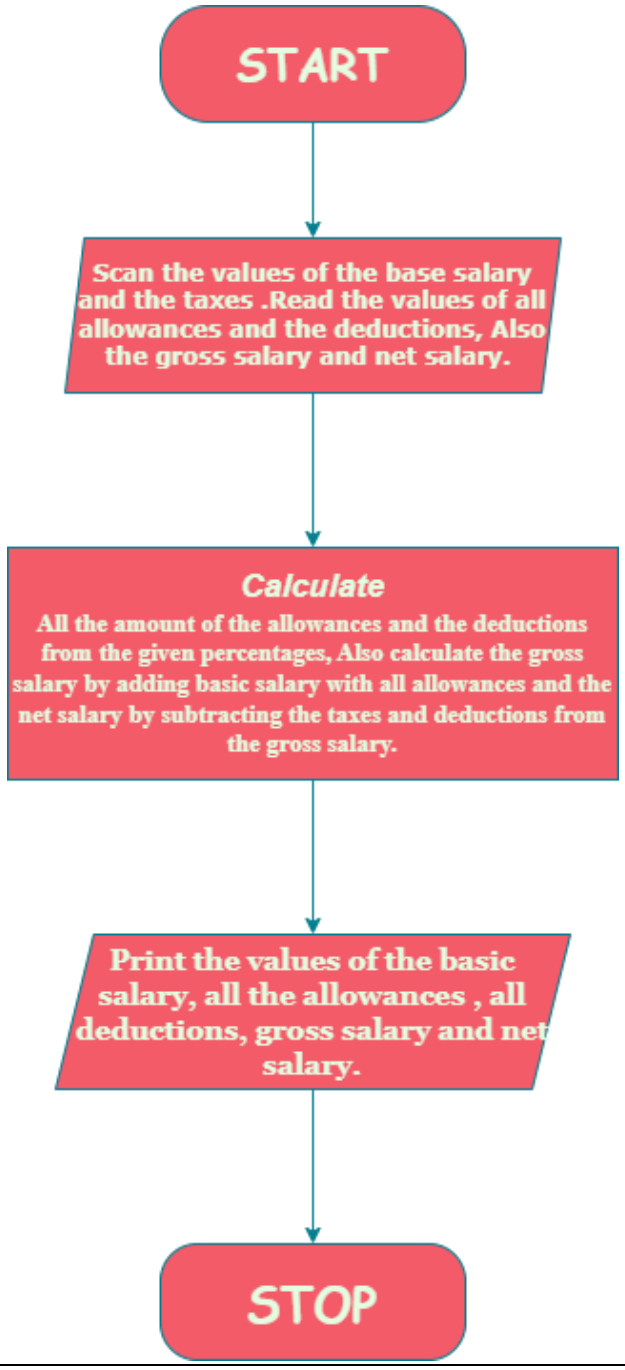
1. Has this scenario helped you learn about integer and float datatype? If yes, then mention the requirements of using integer and float data types.

**Answer**

Yes, it helped me to understand variable declaration and the use of float data type .

**Program 2.2**

Write a program to calculate Net Salary. User has to input Basic Salary and Output should be: Enter Basic Salary: 5000 (e.g. 5000) Allowances:
DA = 70% of Basic Salary
HRA = 7% of Basic Salary
MA = 2% of Basic Salary TA = 4% of Basic Salary Deduction:
PF = 12% of Basic Salary
IT = any value (e.g. 500)

| | |
|---|---|
| **Flowchart** |  |
| **Algorithm** | Step1: Start<br>Step2: Enter your basic salary<br>Step3: Calculate all amounts using the formulas given<br>Step4: Print all the values calculated<br>Step5: Stop |

**Code**

```c
/This is Prepared by 23CS041_DHRUV_LOKADIYA/
#include<stdio.h>
int main()
{
        float Basic_salary, DA, HRA, MA, TA, PF, IT, Gross_salary, Net_salary, Allowances, Deduction;

        printf("\n Enter Your basic salary: ");
        scanf("%f",&Basic_salary);

        DA=Basic_salary*(0.7);
        HRA=Basic_salary*(0.07);
        MA=Basic_salary*(0.02);
        TA=Basic_salary*(0.04);

        PF=Basic_salary*(0.12);
        IT=Basic_salary*(0.18);

        Allowances=DA+HRA+MA+TA;
        Deduction=PF+IT;

        Gross_salary=Basic_salary+Allowances;
        Net_salary=Gross_salary-Deduction;

        printf("\nSr.No. \t\t Input/Outputs \t\t\t Ammount");
        printf("\n  1 \t\t Basic salary  \t\t\t %f",Basic_salary);
        printf("\n  2 \t\t DA of Basic salary  \t\t %f",DA);
        printf("\n  3 \t\t HRA of Basic salary  \t\t %f",HRA);
        printf("\n  4 \t\t MA of Basic salary  \t\t %f",MA);
        printf("\n  5 \t\t TA of Basic salary  \t\t %f",TA);
        printf("\n  6 \t\t PF of Basic salary  \t\t %f",PF);
        printf("\n  7 \t\t Gross salary  \t\t\t %f",Gross_salary);
        printf("\n  8 \t\t Net salary  \t\t\t %f",Net_salary);
        printf("\n 23CS041_CS1");
        return 0;
}
```

**Output**

```
 Enter Your basic salary: 20000

Sr.No.          Input/Outputs                   Ammount
  1             Basic salary                    20000.000000
  2             DA of Basic salary              14000.000000
  3             HRA of Basic salary             1400.000000
  4             MA of Basic salary              400.000000
  5             TA of Basic salary              800.000000
  6             PF of Basic salary              2400.000000
  7             Gross salary                    36600.000000
  8             Net salary                      30600.000000
 23CS041_CS1
```

**Question**

1. Have you learned about various data types that can be suitably used for this problem? Do mention which data types can be used and why? Also mention the difference between the outputs.

**Answer**

The other data type that can be used is integer . The difference in the output it will give is the values after decimal point will not be shown.

Sign: Grade: