

IT161 LAB 2

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Date : 07/01/2022

Topic : Ramesh's basic salary is input through the keyboard. His dearness allowance is 40% of the basic salary and house rent allowance is 20% of basic salary. Write an algorithm, flowchart and program to calculate his gross salary.

Objective : To write a C program to input basic salary from the user and display the gross salary on the screen.

Software : Online GDB Compiler and debugger for C (IDE)

Methodology : The program is written such that when executed, it takes Basic salary(BS) as input from the user. The variable storing the value of basic salary is declared to be of float data type so that the user can enter decimal values too.

After the input is taken, the values of dearness allowance(DA) and house rent allowance(HRA) are calculated, given that:

$$DA = (40/100)*BS, \text{ and}$$

$$HRA = (20/100)*BS$$

Thereafter, the gross salary(GS) is calculated, where

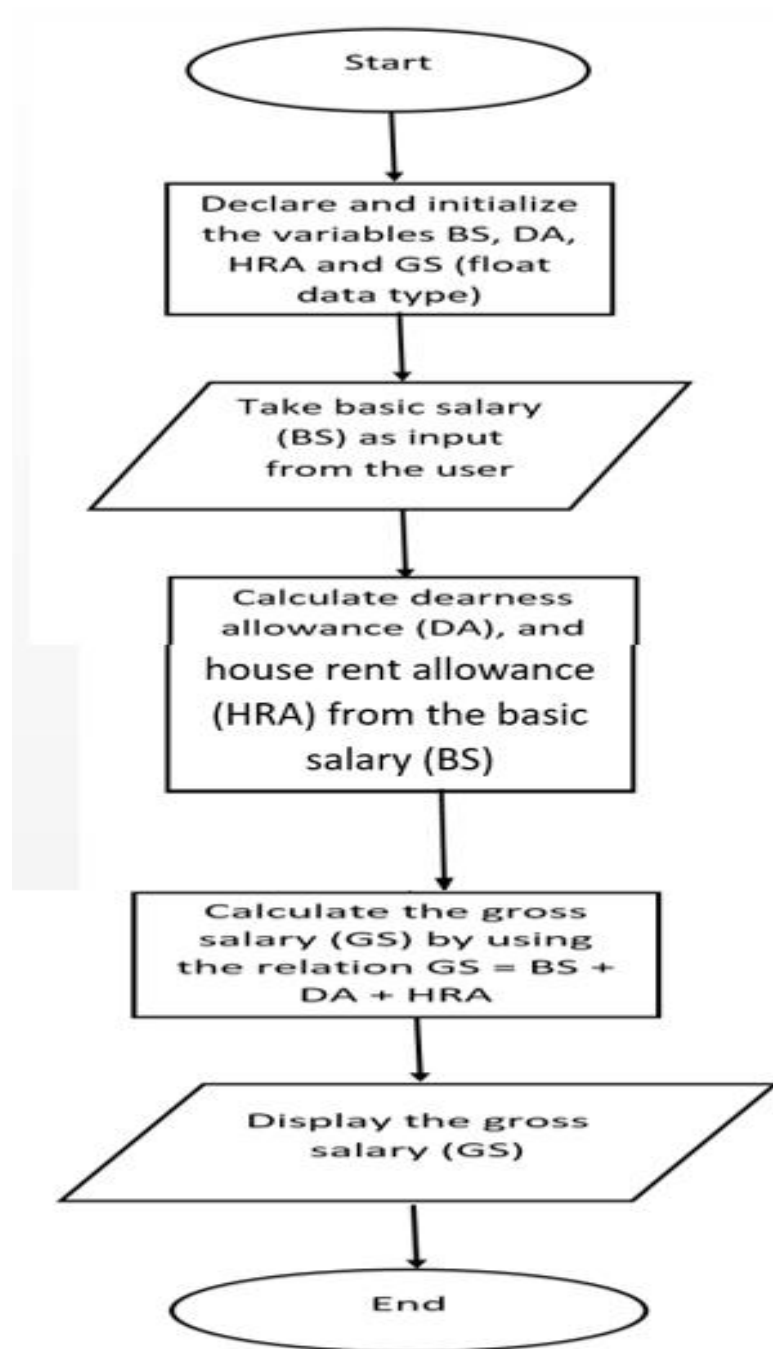
$$GS = BS + DA + HRA$$

The calculated gross salary is then displayed on the screen.

Algorithm of the program :

- Step 1 : Start
- Step 2 : declare and initialize float type variables BS, DA, HRA and GS
- Step 3 : take basic salary (BS) as input from the user
- Step 4 : calculate the dearness allowance (DA) and house rent allowance (HRA)
- Step 5 : $BS + DA + HRA \rightarrow$ gross salary (GS)
- Step 6 : display the gross salary (GS)
- Step 7 : Stop

Flowchart of the program :



Source code of the C program :

/* This C program is prepared by Snehal Nalawade

Roll No : 202151160

Date of preparation : 04/01/2022

this program takes basic salary(BS) as input from the user; calculates the dearness allowance(DA),

**house rent allowance(HRA) and the gross salary(GS) and then displays the gross salary
*/**

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
float BS = 0.00; //declaring and initializing the variables
```

```
float DA = 0.00;
```

```
float HRA = 0.00;
```

```
float GS = 0.00;
```

```
printf("Enter the Basic Salary :");
```

```
scanf("%f", &BS); /*taking basic salary as input from the user and storing it in  
the variable BS */
```

```
DA = (40*BS)/100; //calculating the dearness allowance
```

```
HRA = (20*BS)/100; //calculating the house rent allowance
```

```
GS = BS + DA + HRA; //calculating the gross salary
```

```
printf("Your Gross Salary is : %.2f ",GS); /* displaying the gross salary upto two  
decimal places */
```

```
return 0;
```

```
}
```

```

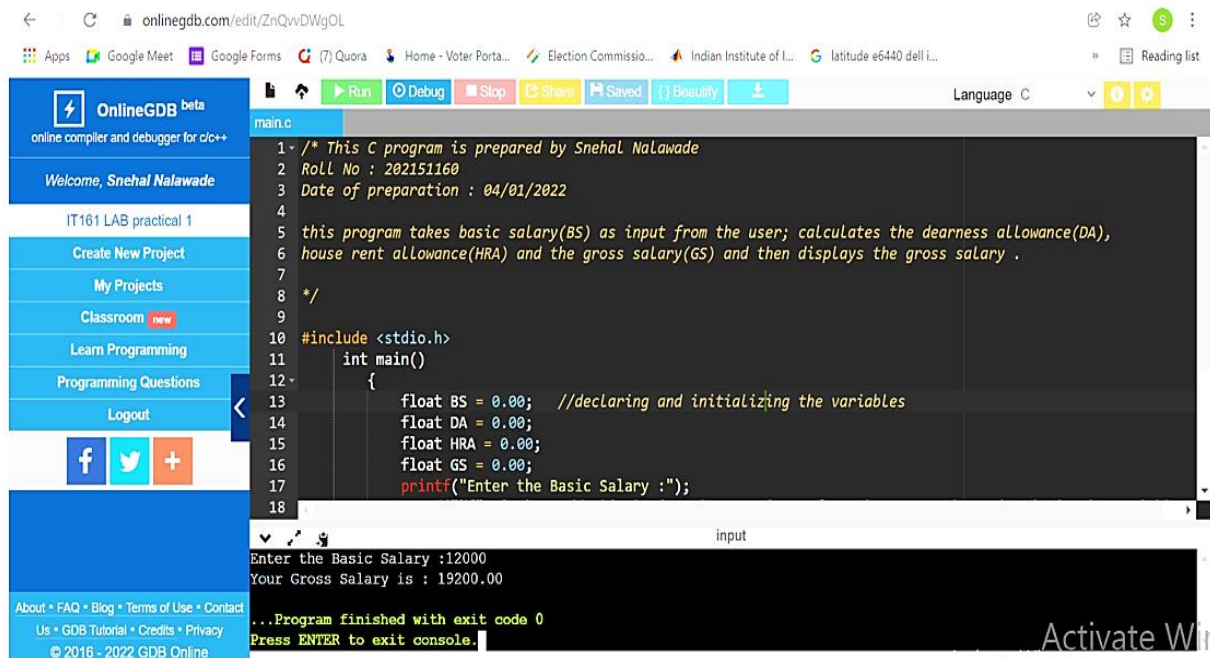
1  /* This C program is prepared by Snehal Nalawade
2  Roll No : 202151160
3  Date of preparation : 04/01/2022
4
5  this program takes basic salary(BS) as input from the user; calculates the dearness allowance(DA),
6  house rent allowance(HRA) and the gross salary(GS) and then displays the gross salary .
7
8  */
9
10 #include <stdio.h>
11 int main()
12 {
13     float BS = 0.00;    //declaring and initializing the variables
14     float DA = 0.00;
15     float HRA = 0.00;
16     float GS = 0.00;
17     printf("Enter the Basic Salary :");
18     scanf("%f", &BS);    //taking basic salary as input from the user and storing it in the variable BS
19     DA = (40*BS)/100;    //calculating the dearness allowance
20     HRA = (20*BS)/100;    //calculating the house rent allowance
21     GS = BS + DA + HRA;    //calculating the gross salary
22     printf("Your Gross Salary is : %.2f ",GS);    //displaying the gross salary upto two decimal places
23     return 0;
24 }
25
26

```

Outputs after executing the C program :

Sample 1) Enter the Basic Salary : 12000 → input

Your Gross Salary is : 19200.00 → output



The screenshot shows the OnlineGDB website interface. On the left is a sidebar with navigation links: 'Welcome, Snehal Nalawade', 'IT161 LAB practical 1', 'Create New Project', 'My Projects', 'Classroom', 'Learn Programming', 'Programming Questions', and 'Logout'. The main area displays a C program in a dark-themed editor. The program includes comments about its author (Snehal Nalawade) and purpose (calculating gross salary from basic salary). It uses `stdio.h` and declares variables for basic salary (BS), dearness allowance (DA), house rent allowance (HRA), and gross salary (GS). The `main` function prompts the user to enter the basic salary. Below the editor, the input and output are shown. The input is '12000' and the output is 'Your Gross Salary is : 19200.00'. The program finished with exit code 0.

```
1 /* This C program is prepared by Snehal Nalawade
2 Roll No : 202151160
3 Date of preparation : 04/01/2022
4
5 this program takes basic salary(BS) as input from the user; calculates the dearness allowance(DA),
6 house rent allowance(HRA) and the gross salary(GS) and then displays the gross salary .
7
8 */
9
10 #include <stdio.h>
11 int main()
12 {
13     float BS = 0.00; //declaring and initializing the variables
14     float DA = 0.00;
15     float HRA = 0.00;
16     float GS = 0.00;
17     printf("Enter the Basic Salary :");
18 }
```

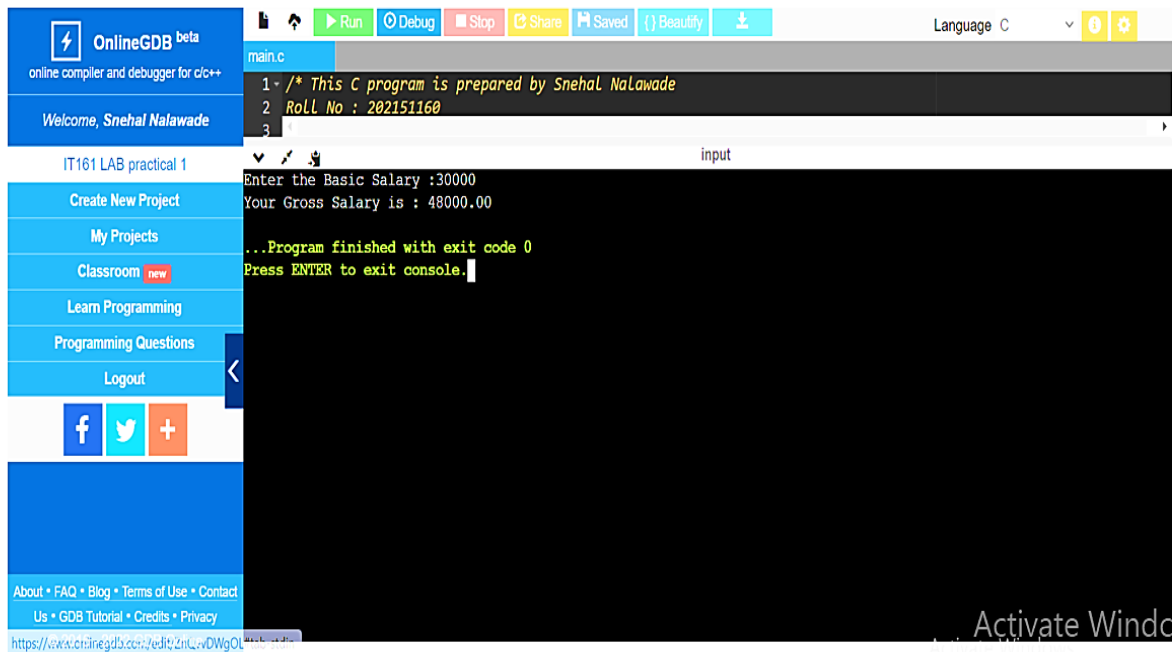
input

Enter the Basic Salary :12000
Your Gross Salary is : 19200.00

...Program finished with exit code 0
Press ENTER to exit console.

Sample 2) Enter the Basic Salary : 30000 → input

Your Gross Salary is : 48000.00 → output



```
main.c
1 /* This C program is prepared by Snehal Nalawade
2 Roll No : 202151160
3
Enter the Basic Salary :30000
Your Gross Salary is : 48000.00
...Program finished with exit code 0
Press ENTER to exit console.
```

Conclusion : The C Code has been executed successfully and the desired results are obtained.

Thank you