

Institute of Computer Technology
B. Tech. Computer Science and Engineering

Sub: ESFP – I
Course Code: 2CSE102
Practical – 3

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Q.1.Problem Definition:

A cashier has currency notes of denominations 5,10,20,50 and 100. If the amount to be

withdrawn is input through the keyboard, find the total number of currency notes of each

denomination the cashier will have to give to the withdrawer.

Solution:

Code:-

```
#include <stdio.h>
#include <math.h>
void main()
{
    int amount = 0, notes1 = 0, notes2 = 0, notes3 = 0, notes4 = 0,
    notes5 = 0;
    printf("Please enter the amount: ");
    scanf("%d", &amount);
```

```

//cal. for 100₹
notes1 = amount / 100;
printf("\nThe number of ₹100 notes will be: %d", notes1);
//cal for 50₹
notes2 = (floor(amount % 100)) / 50;
printf("\nThe number of ₹50 notes will be: %d", notes2);
//cal for 20₹
notes3 = (floor((amount % 100) % 50)) / 20;
printf("\nThe number of ₹20 notes will be: %d", notes3);
//cal for 10₹
notes4 = (floor(((amount % 100) % 50) % 20)) / 10;
printf("\nThe number of ₹10 notes will be: %d", notes4);
//cal for 5₹
notes5 = (floor((((amount % 100) % 50) % 20) % 10)) / 5;
printf("\nThe number of ₹5 coins will be: %d", notes5);
}

```

The screenshot shows a web browser window with the GDB online debugger. The code editor displays the C program from the previous block. The console shows the execution results for an input of 190.

```

Please enter the amount: 190

The number of ₹100 notes will be: 1
The number of ₹50 notes will be: 1
The number of ₹20 notes will be: 2
The number of ₹10 notes will be: 0
The number of ₹5 coins will be: 0

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

```

Q.2.Problem Definition:

The distance between two cities (in km) is input through the keyboard.
Make a program to

convert and print this distance in meters, feet, inches, and centimetre.

Solution:

Code:-

```
//practical-3 (Q-2)
```

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

```
void main()
```

```
{
```

```
    int dist;
```

```
    int meter;
```

```
    int feet;
```

```
    int inche;
```

```
    int centimeter;
```

```
    printf("Enter the value in Kilometer: \n");
```

```
    scanf("%d",&dist);
```

```
    meter=dist*1000;
```

```
    feet=dist*3280;
```

```
    inche=dist*39370;
```

```
    centimeter=dist*100000;
```

```
    printf("The entered value in meters is:%d meters\n",meter);
```

```

printf("The entered value in feets is:%d feets\n",feet);
printf("The entered value in inches is:%d inches\n",inche);
printf("The entered value in centimeters is:%d
centimeters",centimeter);

}

```

The screenshot shows the GDB online Debugger interface. The top bar includes tabs for 'GDB online Debugger | Compiler', 'Untitled document - Google Doc', and 'Untitled document - Google Doc'. The main area is divided into two panes. The left pane shows the source code for 'main.c':

```

3 #include <stdio.h>
4 void main()
5 {
6     int dist;
7     int meter;
8     int feet;
9     int inche;
10    int centimeter;
11
12    printf("Enter the value in Kilometer: \n");

```

The right pane shows the program's output in a terminal window:

```

Enter the value in Kilometer:
1000
The entered value in meters is:1000000 meters
The entered value in feets is:3280000 feets
The entered value in inches is:39370000 inches
The entered value in centimeters is:100000000 centimeters

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

```

The bottom of the image shows a Windows taskbar with various icons and a system tray displaying '29°C Mostly cloudy', 'ENG IN', and the date '06-08-2023'.

Q.3.Problem Definition:

In a town, the percentage of men is 52%. The percentage of total literacy is 48% of total population. If total percentage of literate men is 35 of the total population, make a program to find the total number of illiterate men and women if the population of the town is 80000.

Solution:

Code:-

```
#include <stdio.h>

void main()
{
    float total_population;

    printf("Enter the number of population Here: ");
    scanf("%f",&total_population);


    float men = (52.0/100)*total_population;
    printf("Total number of men are: %1.f", men);


    float litpop = (48.0/100)*total_population;
    printf("\nTotal literate people are: %1.f", litpop);


    float litmen = (35.0/100)*total_population;
    printf("\nTotal literate men are: %1.f", litmen);


    //no external eqation was needed here.

    printf("\nTotal women are: %1.f", (totpop-men));
```

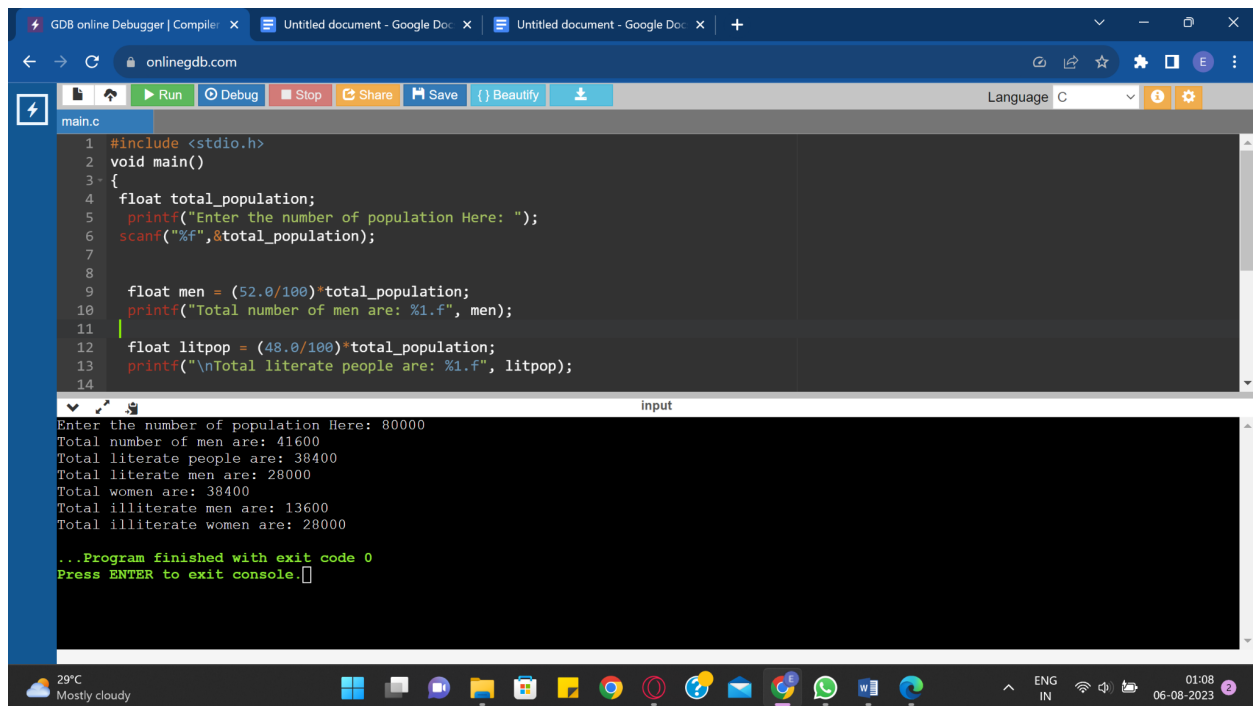
```
float totwom = (totpop-men);
```

```
printf("\nTotal illiterate men are: %1.f",men-litmen);
```

```
float totlitwom = litpop - litmen;
```

```
printf("\nTotal illiterate women are: %1.f",totwom - totlitwom);
```

```
}
```



The screenshot displays a web-based GDB online debugger interface. The top section shows the source code for a C program named 'main.c'. The code calculates population statistics based on a total population of 80,000. It determines the number of men (41,600) and women (38,400), then calculates the number of literate and illiterate individuals for each gender. The bottom section shows the program's execution output, which matches the calculations in the code. The output includes the total population, total number of men, total literate people, total literate men, total women, total illiterate men, and total illiterate women. The program ends with an exit code of 0.

```
1 #include <stdio.h>
2 void main()
3 {
4     float total_population;
5     printf("Enter the number of population Here: ");
6     scanf("%f",&total_population);
7
8
9     float men = (52.0/100)*total_population;
10    printf("Total number of men are: %1.f", men);
11
12    float litpop = (48.0/100)*total_population;
13    printf("\nTotal literate people are: %1.f", litpop);
14
15    float totwom = (totpop-men);
16    printf("\nTotal illiterate men are: %1.f",men-litmen);
17
18    float totlitwom = litpop - litmen;
19    printf("\nTotal illiterate women are: %1.f",totwom - totlitwom);
20
21 }
```

input

```
Enter the number of population Here: 80000
Total number of men are: 41600
Total literate people are: 38400
Total literate men are: 28000
Total women are: 38400
Total illiterate men are: 13600
Total illiterate women are: 28000
...Program finished with exit code 0
Press ENTER to exit console.
```

Q.4.Problem Definition:

- A user just saw the problems and didn't make any submissions and hence won't get any rating.
- B users who made a submission but could not solve any problem correctly. Thus, after the contest, they will get a rating in the range 800 - 1000.
- Everyone else could correctly solve at least 1 problem. Thus, they will get a rating strictly greater than 1000 after the contest.

You need to find output the number of new users in the contest who, after the contest, will get a rating and also the number of new users who will get a rating strictly greater than 1000.

Solution:

Code:-

```
#include <stdio.h>
void main()
{
    int N = 0;
    int A = 0;
    int B = 0;
    printf("Enter the total number of users: ");
    scanf("%d",&N);
    printf("\nEnter the number of users that didn't submit: ");
    scanf("%d",&A);
    printf("\nEnter the number of users that submitted: ");
    scanf("%d",&B);
    int X=N-A;
    printf("\nNumber of users get the rating: %d", X);
    printf("\nNumber of user that got rating strictly more than 1000: %d",
X-B);
}
```

GDB online Debugger | Compiler x

Untitled document - Google Doc x

Untitled document - Google Doc x

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onlinegdb.com

RunDebugStopShareSaveBeautify

Language C

main.c

```
1 #include <stdio.h>
2 void main()
3 {
4     int N = 0;
5     int A = 0;
6     int B = 0;
7     printf("Enter the total number of users: ");
8     scanf("%d",&N);
9     printf("\nEnter the number of users that didn't submit: ");
10    scanf("%d",&A);
11    printf("\nEnter the number of users that submitted: ");
12    scanf("%d",&B);
13    int X=N-A;
14    printf("\nNumber of users get the rating: %d", X);
15    printf("\nNumber of user that got rating strictly more than 1000: %d", X-B);
16 }
```

input

```
Enter the total number of users: 2341
Enter the number of users that didn't submit: 1234
Enter the number of users that submitted: 321

Number of users get the rating: 1107
Number of user that got rating strictly more than 1000: 786

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

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