

Assignment Code for Programming in C

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 Subject: Programming in C

 Department: CSE-62

 Submission Date: 31-07-2025

Programs:

1. Print your name ten times.
 2. Print numbers from 0 to 10 and 10 to 0 using loops.
 3. Compute the sum of the first 10 natural numbers.
 4. Read 10 numbers from the keyboard and find their sum and average.
 5. Display the cube of the number up to an integer.
 6. Display the multiplication table for a given integer.
 7. Display the n terms of odd natural numbers and their sum.
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1. Program to print your name ten times

Code :

The screenshot shows a dark-themed C IDE interface. On the left, the code editor displays a file named "main.c" with the following content:

```
1 #include <stdio.h>
2
3 int main() {
4     for (int i = 0; i < 10; i++) {
5         printf("Mahdi Hasan Shuvo\n");
6     }
7     return 0;
8 }
```

On the right, the "Output" panel shows the following text, indicating that the program has been run and printed its message 10 times:

```
Mahdi Hasan Shuvo
```

2. Program to print numbers from 0 to 10 and 10 to 0 using loops

Code :

The screenshot shows an online compiler interface for C. On the left, the code editor displays a file named "main.c" with the following content:

```
1 #include <stdio.h>
2
3 int main() {
4     int my_number;
5
6     printf("Numbers from 0 to 10:\n");
7     for(my_number = 0; my_number <= 10;
8         my_number++) {
9         printf("%d ", my_number);
10
11     printf("\nNumbers from 10 to 0:\n");
12     for(my_number = 10;my_number>= 0;
13         my_number--) {
14         printf("%d ", my_number);
15
16     return 0;
17 }
```

On the right, the "Output" panel shows the following text, indicating that the program has been run and printed two sets of numbers:

```
Numbers from 0 to 10:
0 1 2 3 4 5 6 7 8 9 10
Numbers from 10 to 0:
10 9 8 7 6 5 4 3 2 1 0
== Code Execution Successful ==
```

3. Program to compute the sum of the first 10 natural numbers

Code :

The screenshot shows a Visual Studio Code interface with the following details:

- File Explorer:** On the left, it lists files: code, c.txt, epsek.py, in.c, in.exe, in.py, ge_create.py, get_ID.txt, t.py, x.py.
- Code Editor:** The main area displays a C program named main.c. The code prints the first 10 natural numbers and their sum.

```
1  /*__DEVOLPER__ = " MAHDI HASAN SHUVO ";
2  //__GitHub__ = "Mahdi-hasan-shuvo";
3  //__LinkedIn__ = "mahdi-hasan-shuvo";*/
4  #include <stdio.h>
5
6  int main() {
7      int sum = 0;
8
9      printf("The first 10 natural numbers are:\n");
10     for (int i = 1; i <= 10; i++) {
11         printf("%d ", i);
12         sum += i;
13     }
14
15     printf("\nThe Sum is: %d\n", sum);
16     return 0;
17 }
18
```
- Terminal:** Below the editor, the terminal window shows the output of running the program:

```
PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
● The first 10 natural numbers are:
1 2 3 4 5 6 7 8 9 10
The Sum is: 55
PS M:\Gast project\Clint-58>
```
- Bottom Navigation:** The tabs PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is selected), and PORTS are visible.

4. Program to read 10 numbers from the keyboard and find their sum and average

Code :

The screenshot shows a code editor interface with a dark theme. The main area displays a C program named 'main.c'. The code prompts the user to input 10 numbers, calculates their sum and average, and prints the results. Below the code editor is a terminal window showing the execution of the program and its output.

```
C main.c > main()
2  /* _DEVOLPER_ = " MAHDI HASAN SHUVO ";
4  // _LInKeDin_ = mandi-nasan-shuvo , /
5  #include <stdio.h>
6
7  int main() {
8      int sum = 0, number;
9      double average;
10
11     printf("Input the 10 numbers :\n");
12     for (int i = 1; i <= 10; i++) {
13         printf("Number-%d :", i);
14         scanf("%d", &number);
15         sum += number;
16     }
17     average = sum / 10.0;
18     printf("The sum of 10 no is: %d\n", sum);
19     printf("The Average is: %lf\n", average);
20 }
21
```

TERMINAL

```
PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
Input the 10 numbers :
Number-1 :3
Number-2 :4
Number-3 :5
Number-4 :
6
Number-5 :6
Number-6 :7
Number-7 :8
Number-8 :9
Number-9 :0
Number-10 :9
The sum of 10 no is: 57
The Average is: 5.700000
PS M:\Gast project\Clint-58>
```

5. Program to display the cube of the number up to an integer

Code :

```
C main.c > ...
1
2 /* __DEVELOPER__ = " MAHDI HASAN SHUVO ";
3 //__GitHub__ = "Mahdi-hasan-shuvo";
4 //__LinkedIn__ = "mahdi-hasan-shuvo";*/
5 #include <stdio.h>
Windsurf: Refactor | Explain | Generate Function Comment | X | ⚙️
6 int main() {
7     int terms;
8     printf("Input number of terms: ");
9     scanf("%d", &terms);
10
11    for (int i = 1; i <= terms; i++) {
12        printf("Number is : %d and cube of the %d is : %d\n", i, i, i * i * i);
13    }
14    return 0;
15 }
16
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS
```

● PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
Input number of terms: 4
Number is : 1 and cube of the 1 is : 1
Number is : 2 and cube of the 2 is : 8
● Number is : 3 and cube of the 3 is : 27
Number is : 4 and cube of the 4 is : 64
○ PS M:\Gast project\Clint-58> []

6. Program to display the multiplication table for a given integer

Code :

The screenshot shows a code editor window in VS Code with the following details:

- Title Bar:** Shows the file name "main.c" and a close button.
- Code Area:** Displays the following C code:

```
1
2 /* _DEVOLPER_ = " MAHDI HASAN SHUVO ";
3 //__GitHub__ = "Mahdi-hasan-shuvo";
4 //__LinkedIn__ = "mahdi-hasan-shuvo";*/
5 #include <stdio.h>
Windsurf: Refactor | Explain | Generate Function Comment | X | ⚙️
```

```
6 int main() {
7     int number;
8     printf("Input the number (Table to be calculated): ");
9     scanf("%d", &number);
10
11    for (int i = 1; i <= 10; i++) {
12        printf("%d X %d = %d\n", number, i, number * i);
13    }
14    return 0;
15 }
```
- Bottom Navigation:** Shows tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is selected), and PORTS.
- Terminal Area:** Shows the output of the program execution:

```
PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
Input the number (Table to be calculated): 5
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
5 X 4 = 20
5 X 5 = 25
5 X 6 = 30
5 X 7 = 35
5 X 8 = 40
5 X 9 = 45
5 X 10 = 50
PS M:\Gast project\Clint-58>
```

7. Program to display the n terms of odd natural numbers and their sum

Code :

```
C main.c > ...
1
2 /*__DEVOLPER__ = " MAHDI HASAN SHUVO ";
3 //__GitHub__ = "Mahdi-hasan-shuvo";
4 //__LinkedIn__ = "mahdi-hasan-shuvo";*/
5 #include <stdio.h>
Windsurf: Refactor | Explain | Generate Function Comment | X | ⚙️
6 int main() {
7     int terms, sum = 0;
8     printf("Input number of terms: ");
9     scanf("%d", &terms);
10    printf("The odd numbers are :");
11    for (int i = 1; i <= terms; i++) {
12        printf("%d ", 2 * i - 1);
13        sum += 2 * i - 1;
14    }
15    printf("\nThe Sum of odd Natural Numbers up to %d terms: %d\n", terms, sum);
16    return 0;
17 }
18

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS
```

```
PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
Input number of terms: 3
The odd numbers are :1 3 5
The Sum of odd Natural Numbers up to 3 terms: 9
PS M:\Gast project\Clint-58>
```

Thank You Sir..