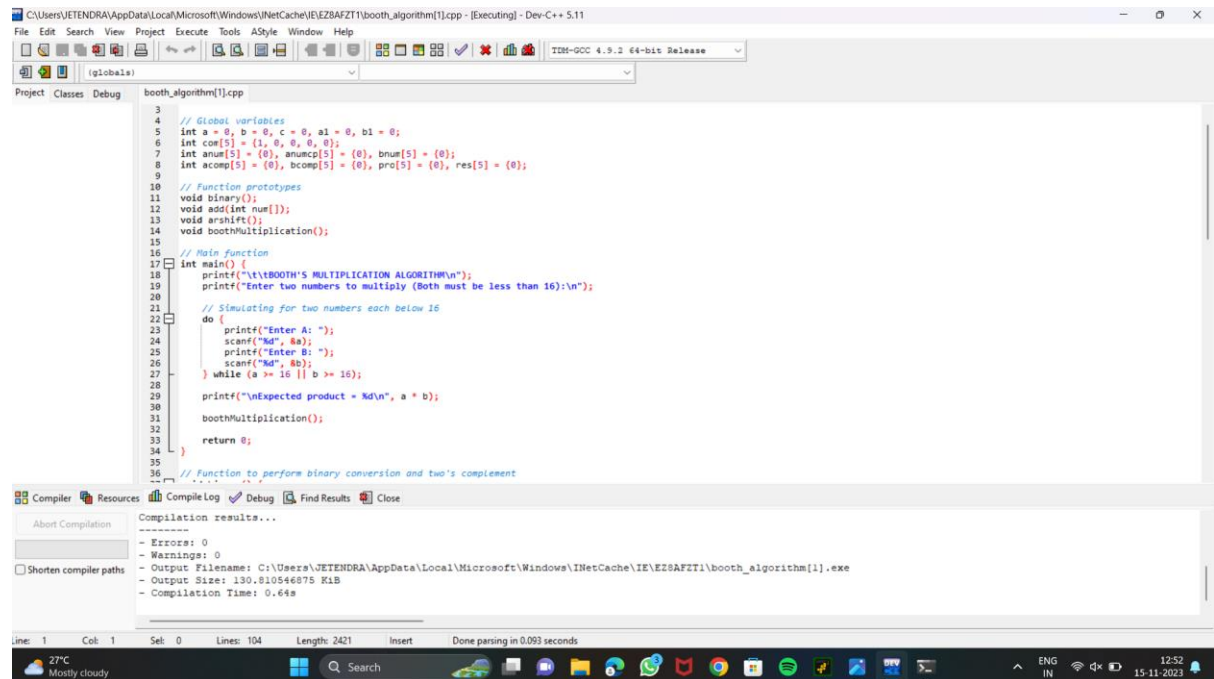


EXP NO 34 BOOTH ALGORITHM

INPUT :



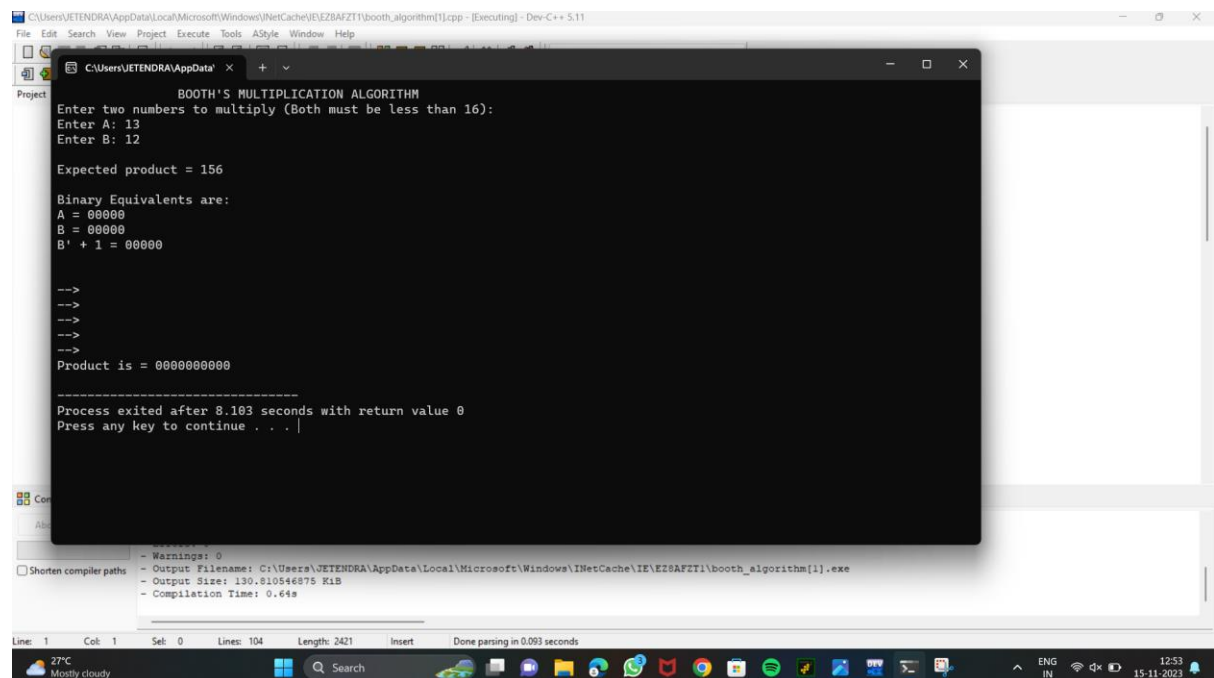
The screenshot shows the Dev-C++ IDE with the following code in `booth_algorithm[1].cpp`:

```
3
4 // Global variables
5 int a = 0, b = 0, c = 0, a1 = 0, b1 = 0;
6 int cor[5] = {1, 0, 0, 0, 0};
7 int anum[5] = {0}, anumcp[5] = {0}, bnum[5] = {0};
8 int acomp[5] = {0}, bcomp[5] = {0}, pro[5] = {0}, res[5] = {0};
9
10 // Function prototypes
11 void binary();
12 void add(int num[]);
13 void arshift();
14 void boothMultiplication();
15
16 // Main function
17 int main() {
18     printf("\t\tBOOTH'S MULTIPLICATION ALGORITHM\n");
19     printf("Enter two numbers to multiply (Both must be less than 16):\n");
20
21     // Simulating for two numbers each below 16
22     do {
23         printf("Enter A: ");
24         scanf("%d", &a);
25         printf("Enter B: ");
26         scanf("%d", &b);
27     } while (a >= 16 || b >= 16);
28
29     printf("\nExpected product = %d\n", a * b);
30     boothMultiplication();
31
32     return 0;
33 }
34
35 // Function to perform binary conversion and two's complement
```

The compilation results window shows:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\JETENDRA\AppData\Local\Microsoft\Windows\IHECache\IE\EZ8AFZT1\booth_algorithm[1].exe
- Output Size: 130.810546875 KIB
- Compilation Time: 0.64s
```

OUT PUT :



The screenshot shows the output of the program in a console window:

```
BOOTH'S MULTIPLICATION ALGORITHM
Enter two numbers to multiply (Both must be less than 16):
Enter A: 13
Enter B: 12

Expected product = 156

Binary Equivalents are:
A = 00000
B = 00000
B' + 1 = 00000

-->
-->
-->
-->
Product is = 0000000000

Process exited after 8.103 seconds with return value 0
Press any key to continue . . .
```