**LAB RECORD**

**Compiler Design**

**19CSE401**



**Amrita School of Computing**

**Amrita Vishwa Vidyapeetham**

**Chennai – 601 103, Tamil Nadu, India.**

**BONAFIDE CERTIFICATE**

**University Reg. No** : CH.EN.U4CSE22180

This is to certify that this is a bonafide record work done by

Mr. / Miss. Anindita Das Badhan studying B.Tech CSE 4th year.

**Internal Examiner1 Internal Examiner2**

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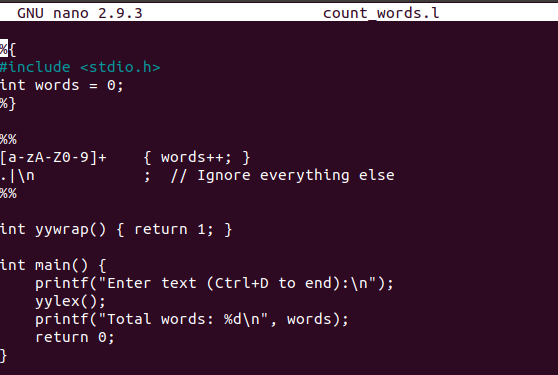
CSE-B, 4th year

Date: 18-06-2025

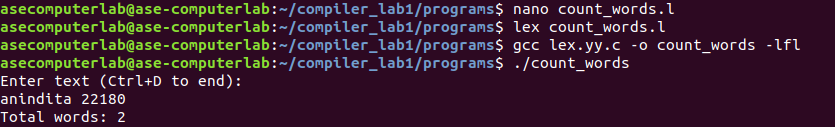
**Lab Exercise -01**

**1. Aim**: To write a program that identifies and counts words in an input sentence.

**Program:**

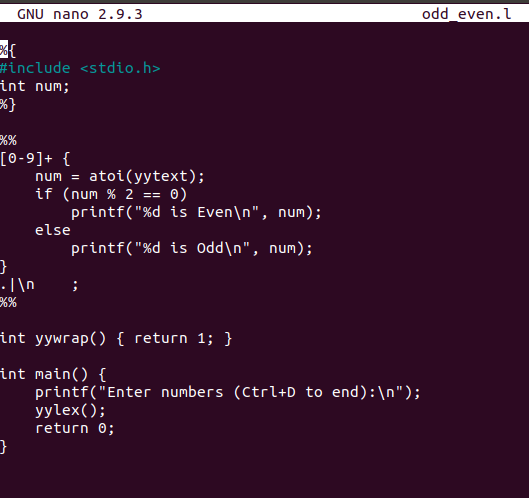


**Output:**

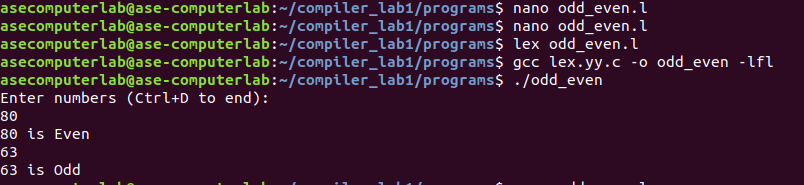


**2. Aim**: To write a program that checks whether a given number is odd or even.

**Program:**

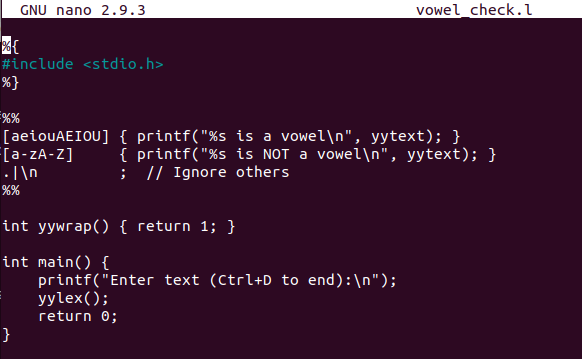


**Output:**

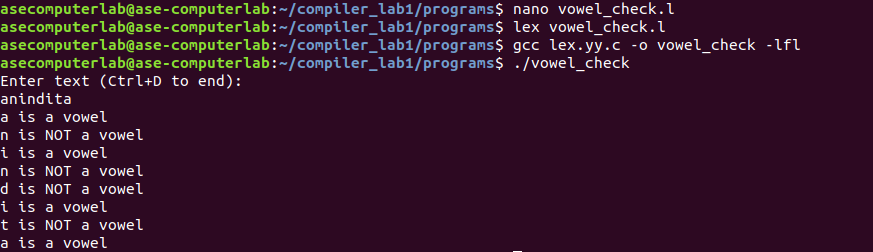


**3. Aim**: To write a program that identifies and counts vowels in each character or string.

**Program**:

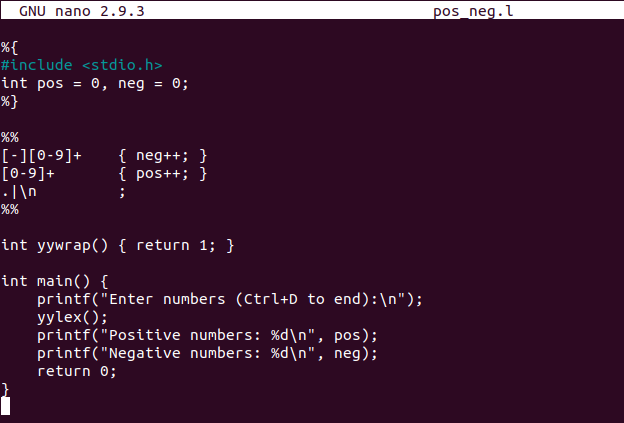


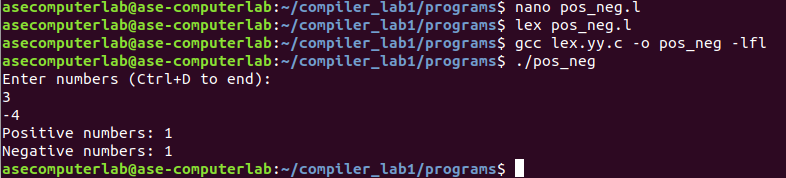
**Output:**



**4. Aim**: To write a program that determines whether a given number is positive or negative.

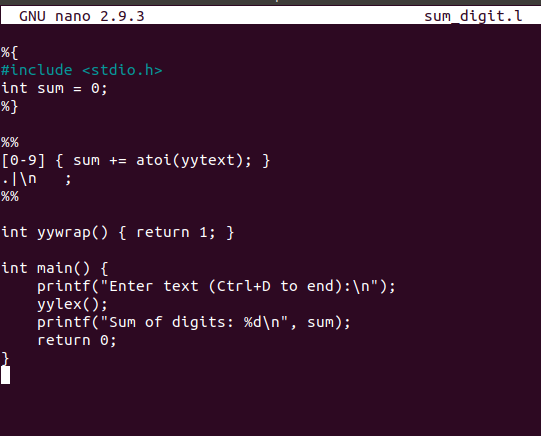
**Program:**



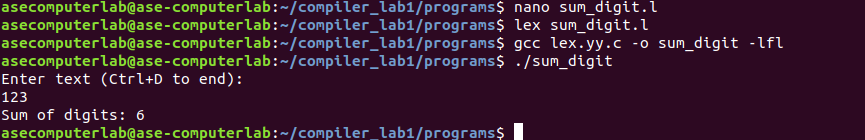
**Output**:

**5. Aim:** To write a program that calculates the sum of the digits of a given number.

**Program:**



**Output**:



**Results**: The programs for Implementation of Lexical Analyzer using Lex Tools

has been successfully executed.

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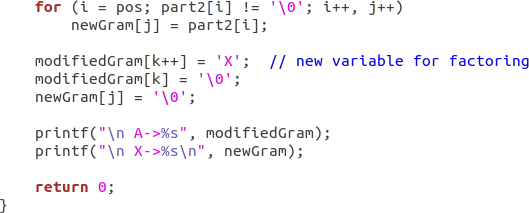
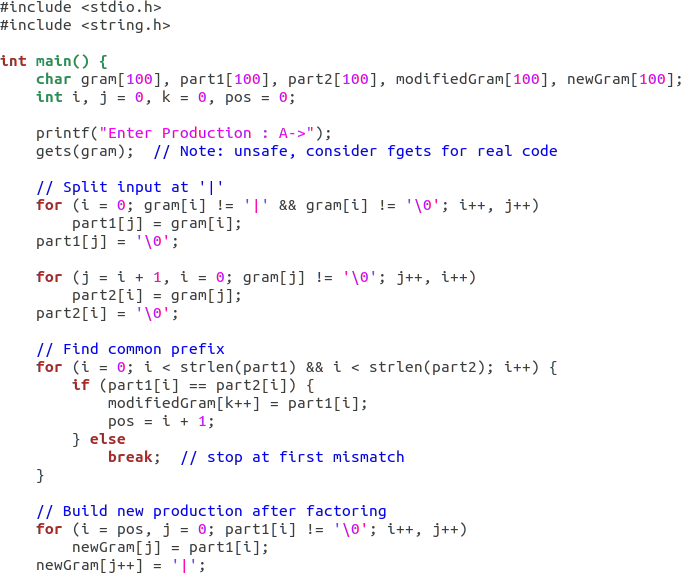
Date: 25-06-2025

Lab Exercise -02

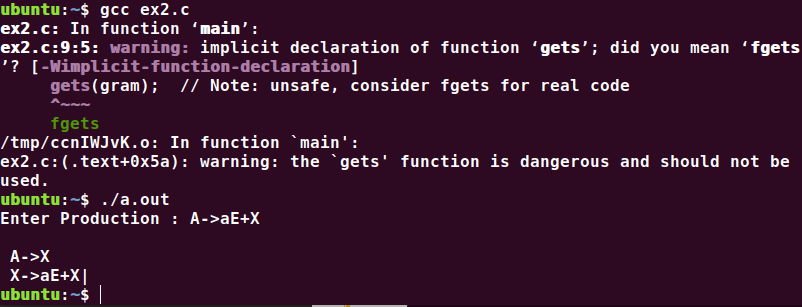
**Aim**: To implement eliminate left recursion and left factoring from the given grammar using C program.

**Left factoring**

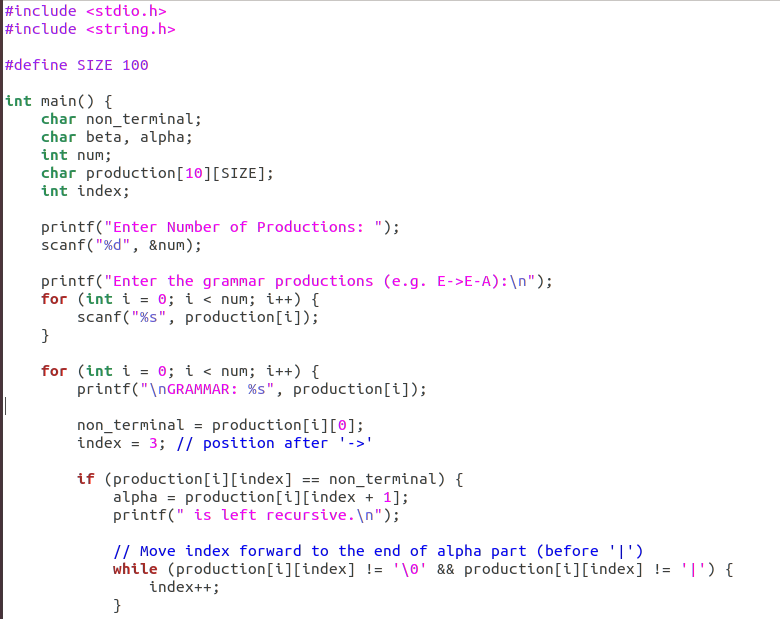
**Code:**

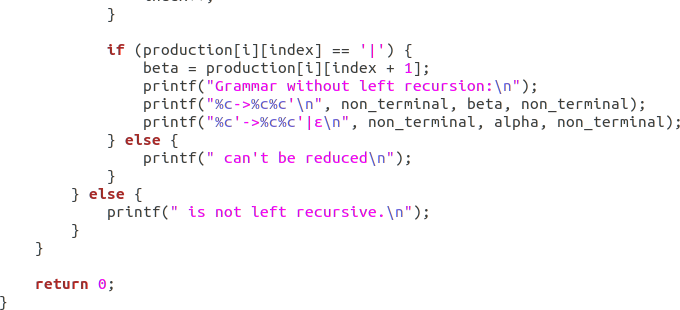
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**Output:**

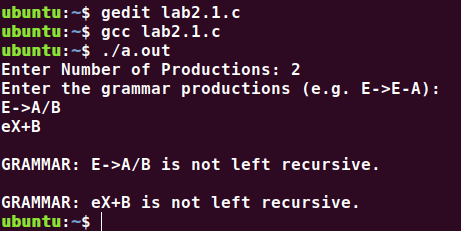
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**Left Recursion**

** Code:**



**Output:**

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**Results**: The program to implement left factoring and left recursion has been successfully executed.

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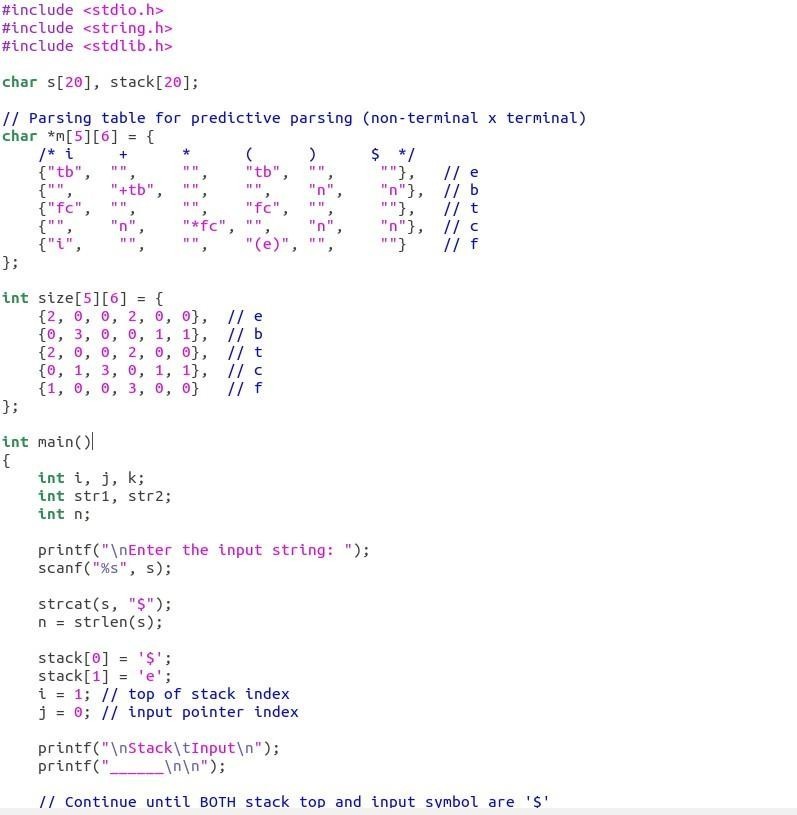
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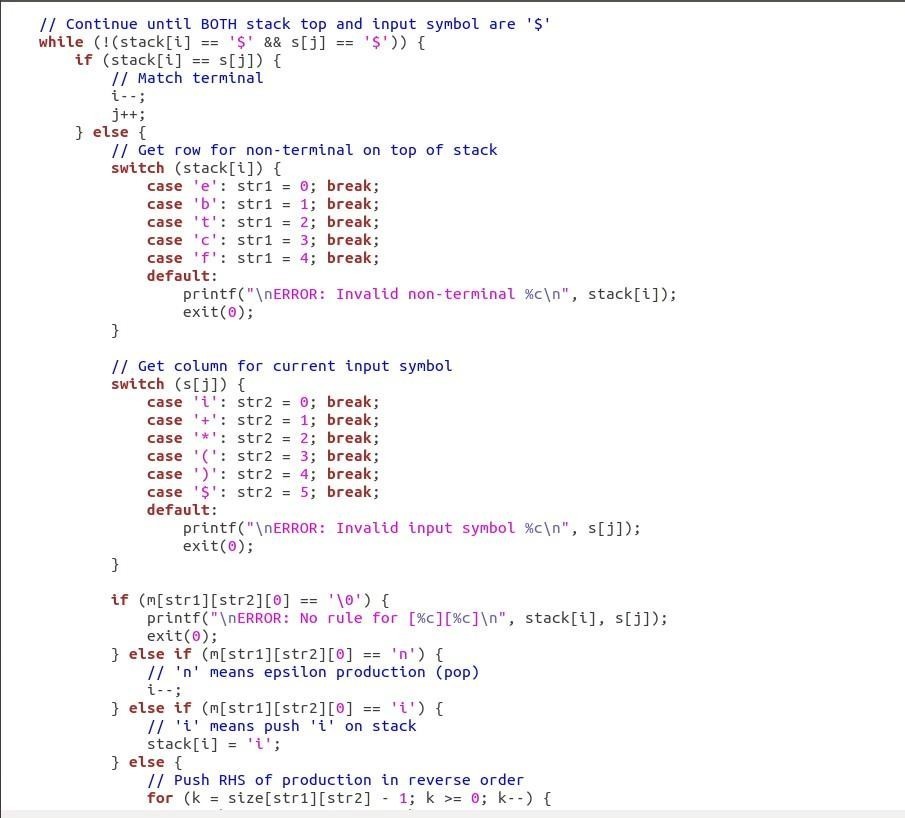
CSE-B, 4th year

Date: 02-07-2025

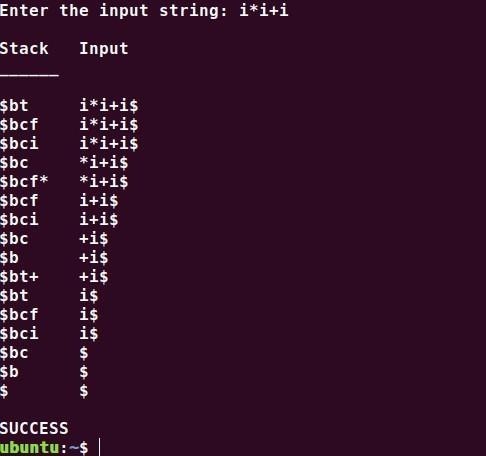
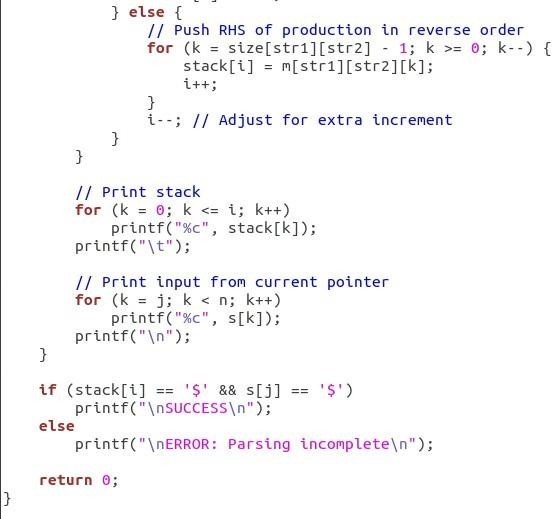
**Lab Exercises - 03**

**Aim**: To implement LL(1) parsing using C program.

 **Code:**



**Output:**



**Results**: The program to implement left factoring and left recursion has

been successfully executed.

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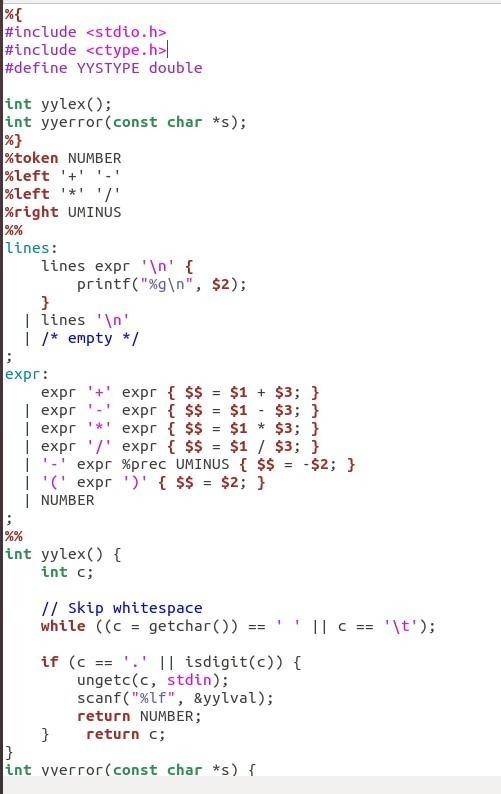
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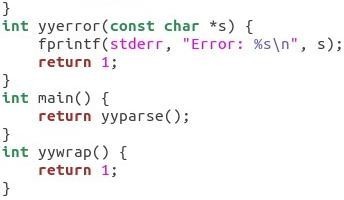
CSE-B, 4th year

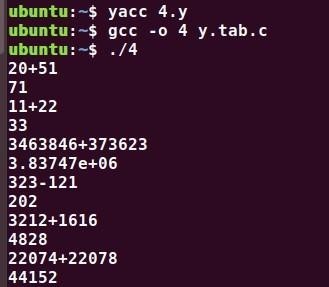
Date: 09-07-2025

**Lab Exercises -04**

**Aim**: To write a program in YACC for parser generation.

 **Code**:



**Output:**

**Results:** The program in YACC for parser generation has been executed successfully

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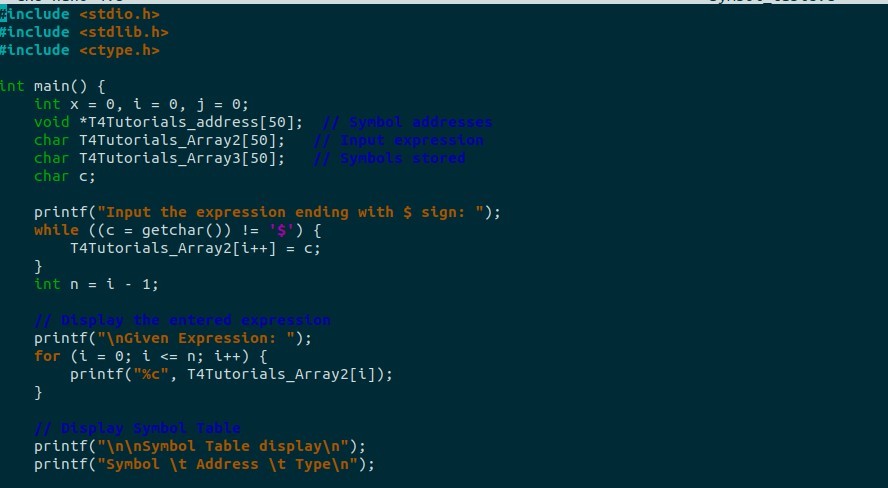
4th Year CSE-B

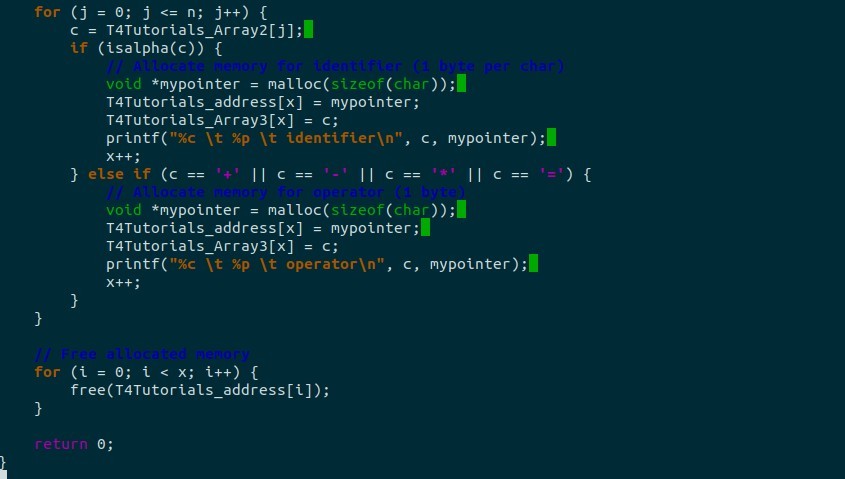
Date: 16-07-2025

**Lab Exercise- 05**

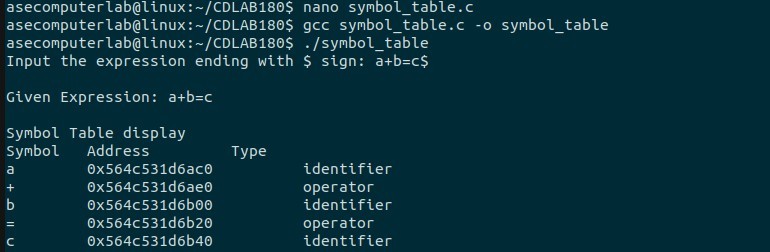
**Aim:** To Implement Symbol Table

**Code:**

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**Output:**

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**Result:** Thus, the program to implement symbol table has been executed successfully.

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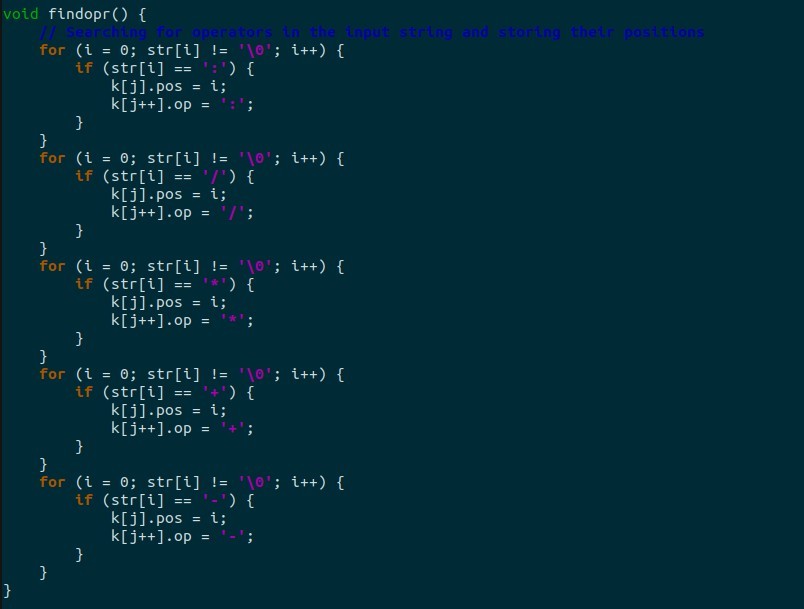
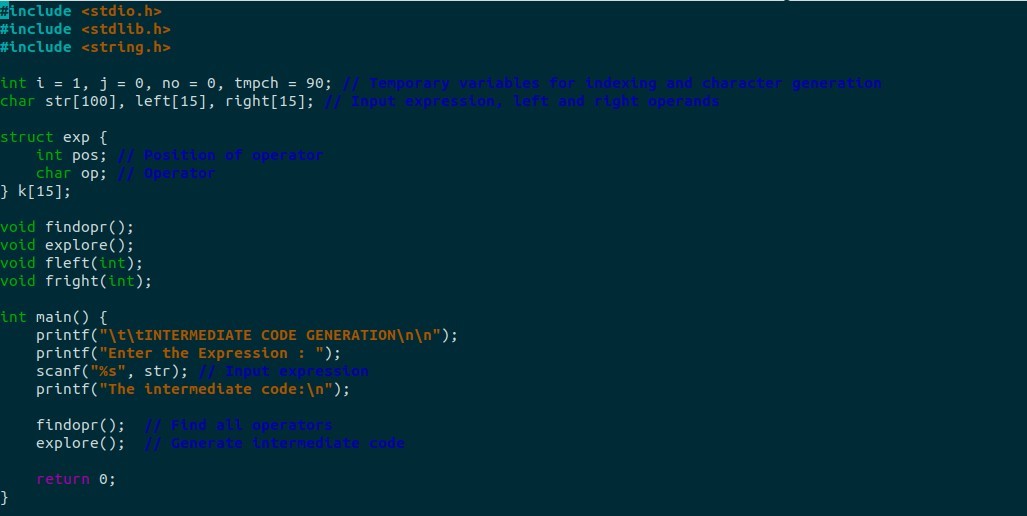
4th Year CSE-B

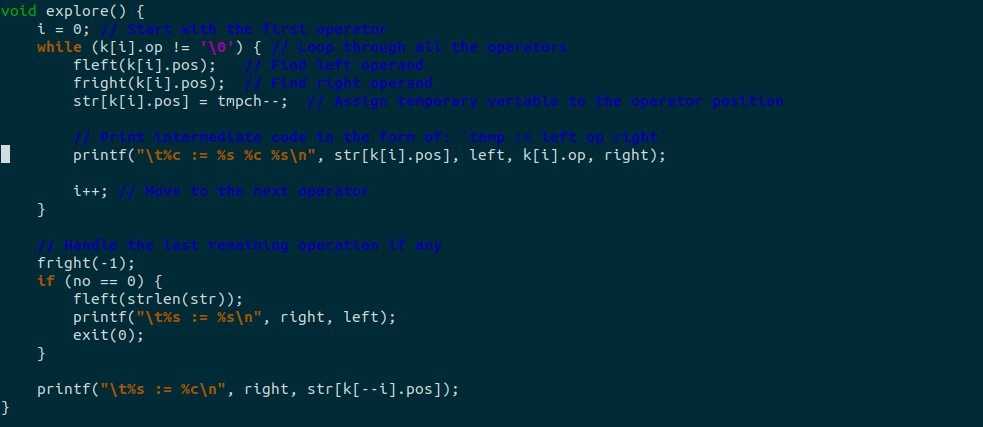
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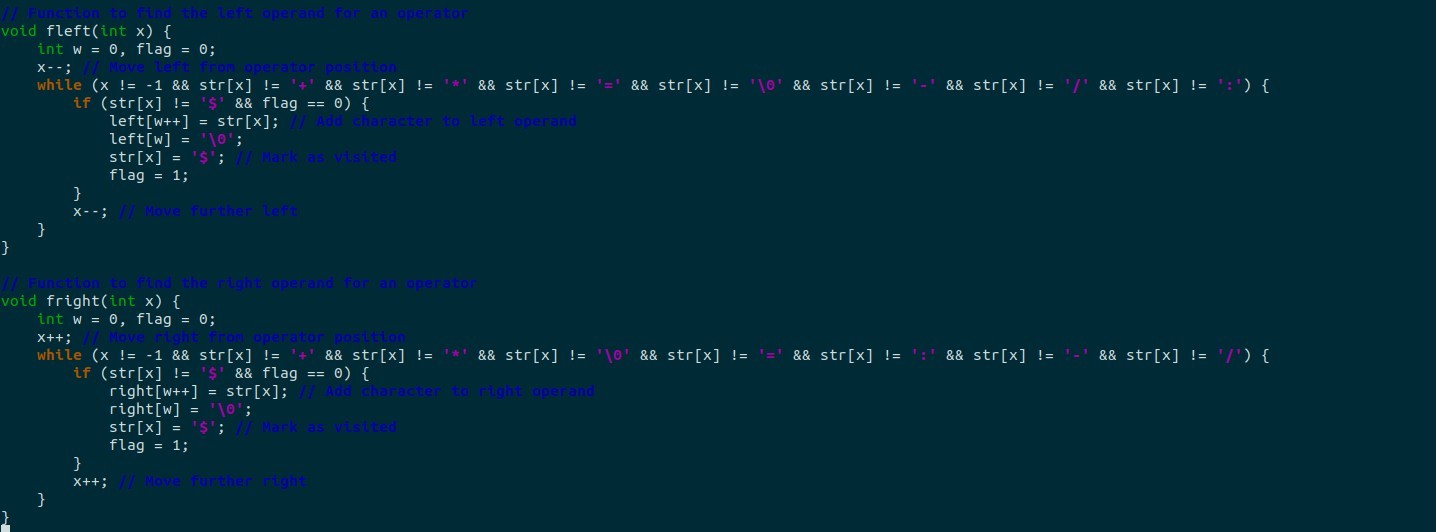
**Lab Exercise- 06**

**Aim:** To Implement Intermediate Code generation

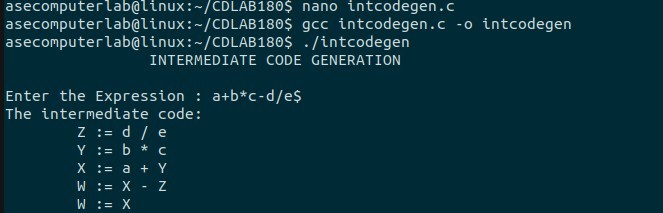
**Code:**

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**Output:**

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**Result:** Thus, the program to implement intermediate code generation has been executed successfully

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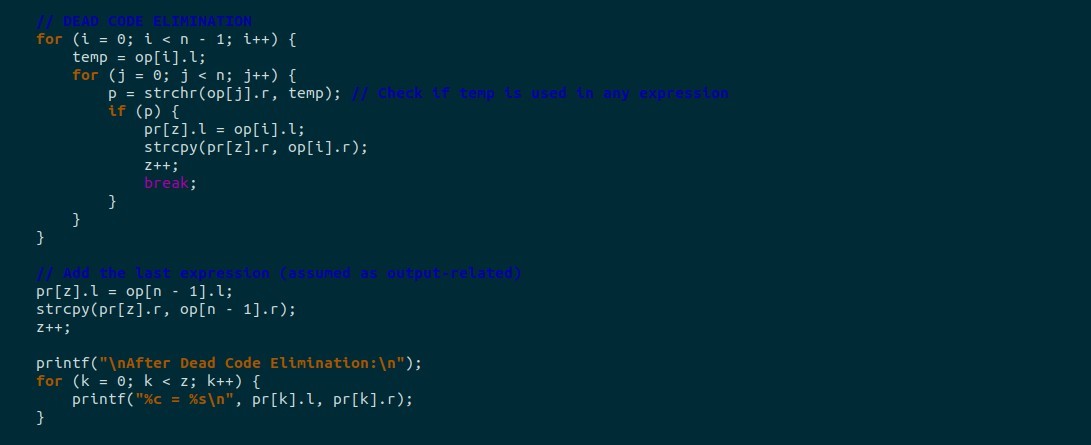
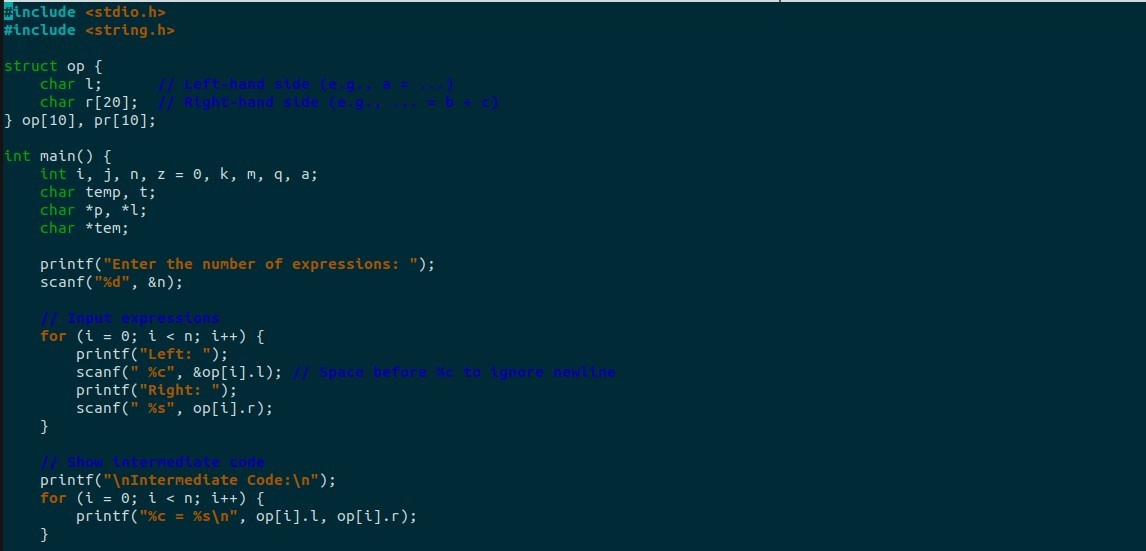
4th Year CSE-B

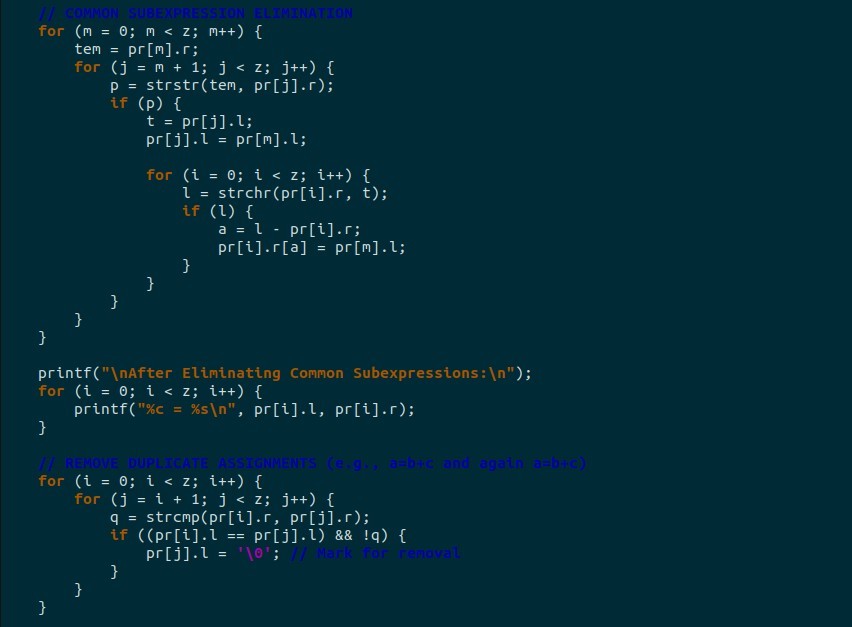
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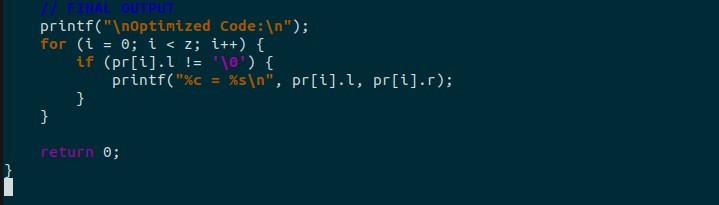
**Lab Exercise- 07**

**Aim:** To implementation of Code Optimization Techniques

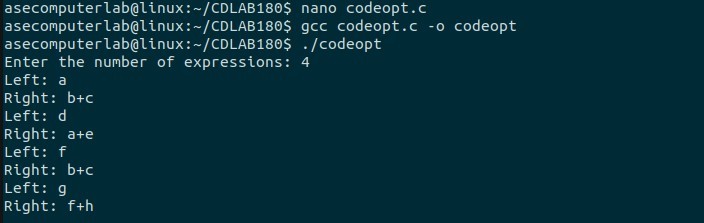
**Code:**

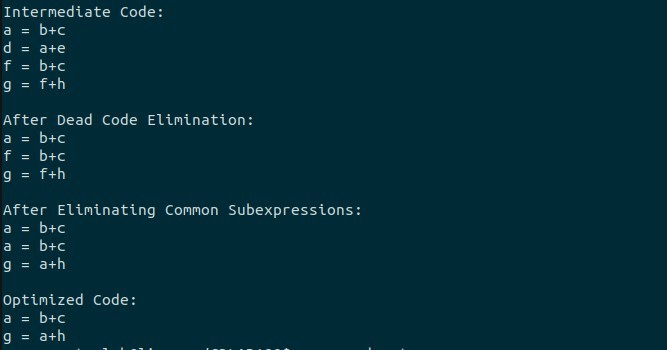
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**Output:**

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**Result:** Thus, the program to implement code optimization has been executed successfully

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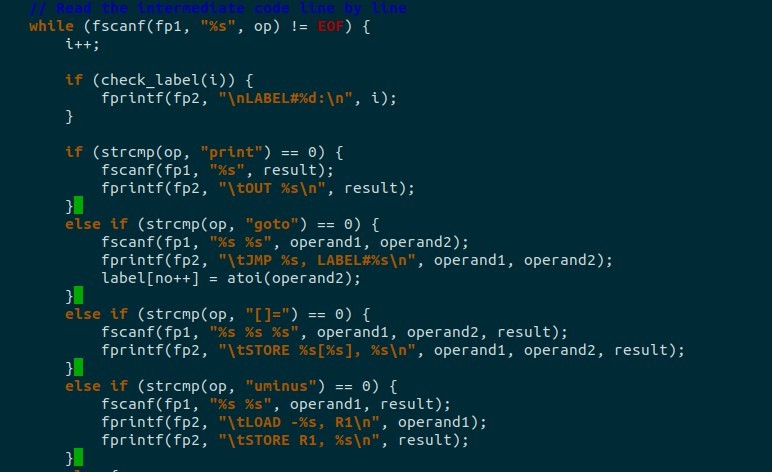
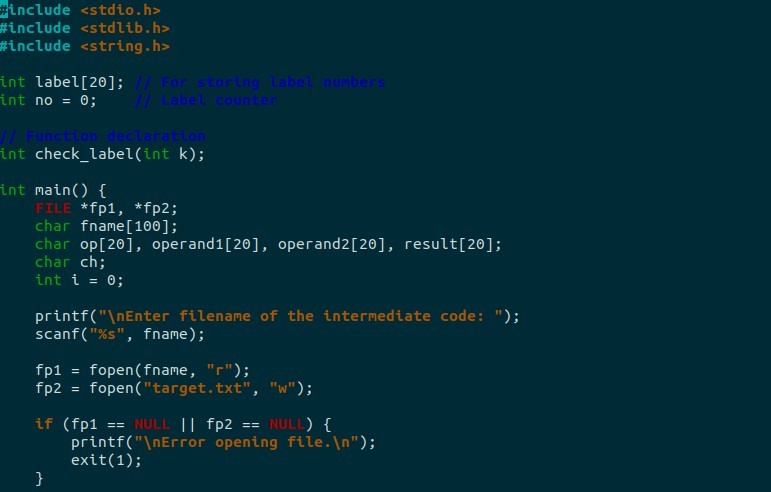
4th Year CSE-B

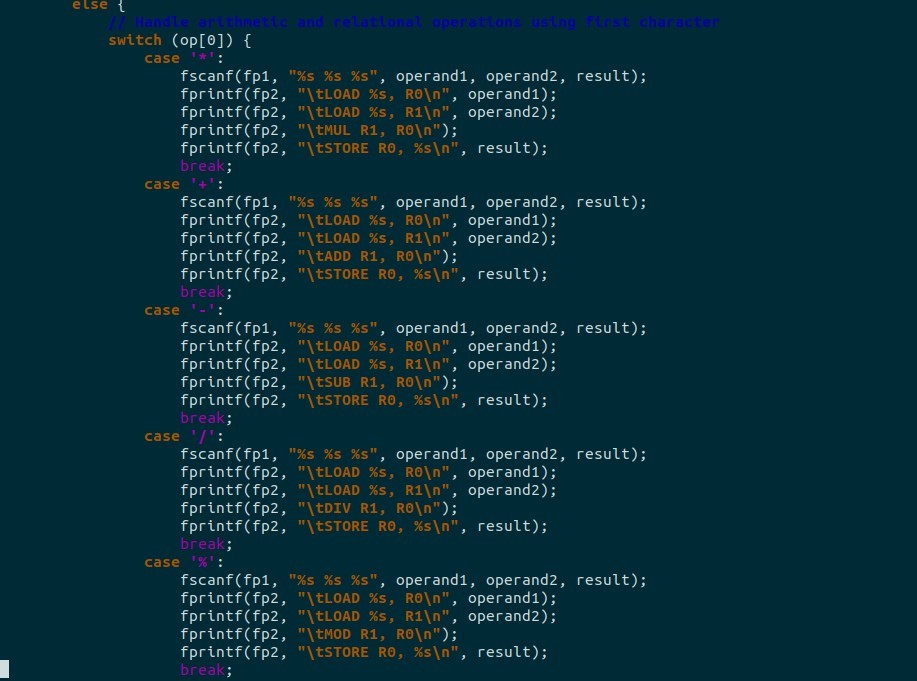
Date: 06-08-2025

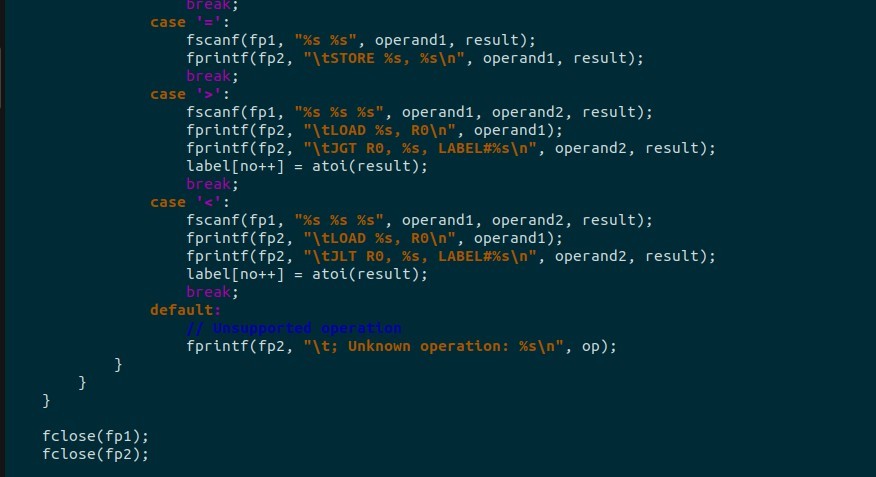
**Lab Exercise- 08**

**Aim:** To write a program that implements the target code generation

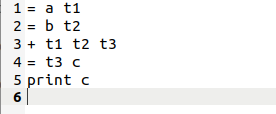
**Code:**

****

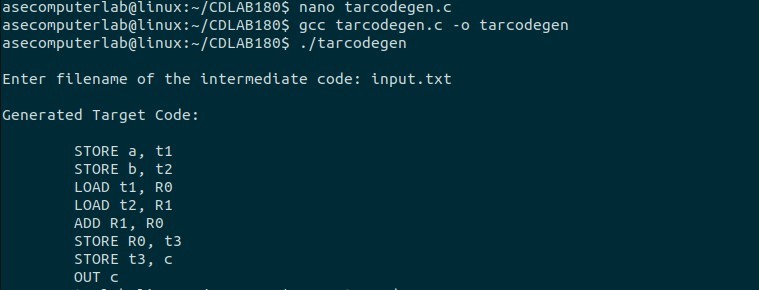


****

**Input.txt**

****

**Output:**

****

**Result**: Thus, the program to implement target code generation has been successfully

executed