**ID number: 22CE101**



**Faculty of Technology and Engineering**

**U & P U. Patel Department of Computer Engineering**

**Practical Performa**

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| --- | --- | --- | --- | --- | --- |
| Academic Year | : | 2024-25 | Semester | : | 6 |
| Course code | : | CE365 | Course name | : | Compiler Construction Design of Language Processor |

**Practical 1**

**Aim: String Validation Against Regular Expression**

**Objective:** To implement a program that validates a user-input string against the regular expression a\*bb. The program should determine whether the input string is valid or invalid based on the defined pattern.

**Screen Shot of Output:**

**A black background with white text

AI-generated content may be incorrect.**

**A close-up of a black screen

AI-generated content may be incorrect.**

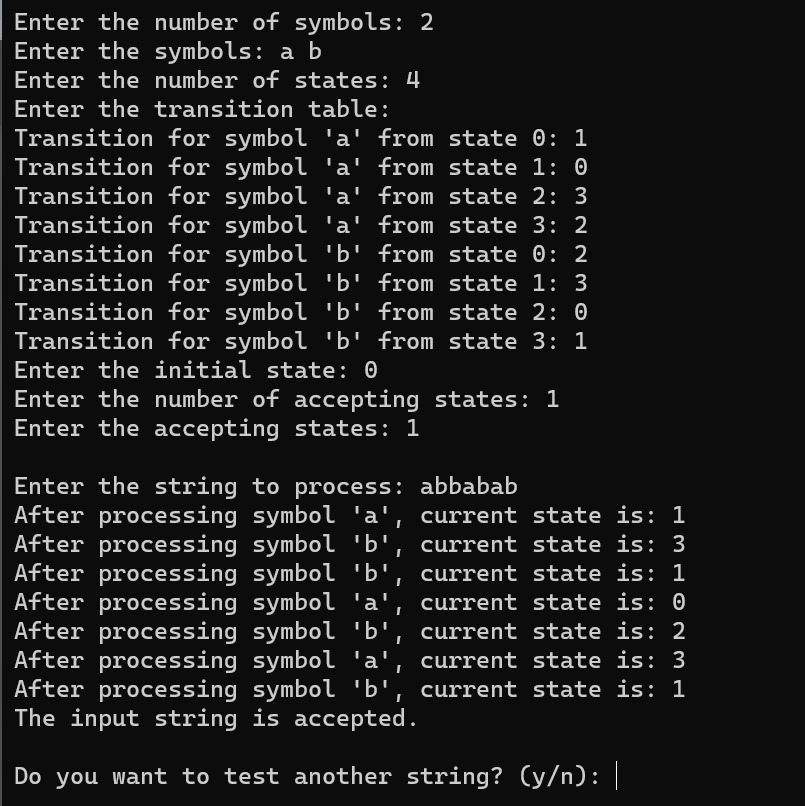
**Conclusion:**

**Practical 2**

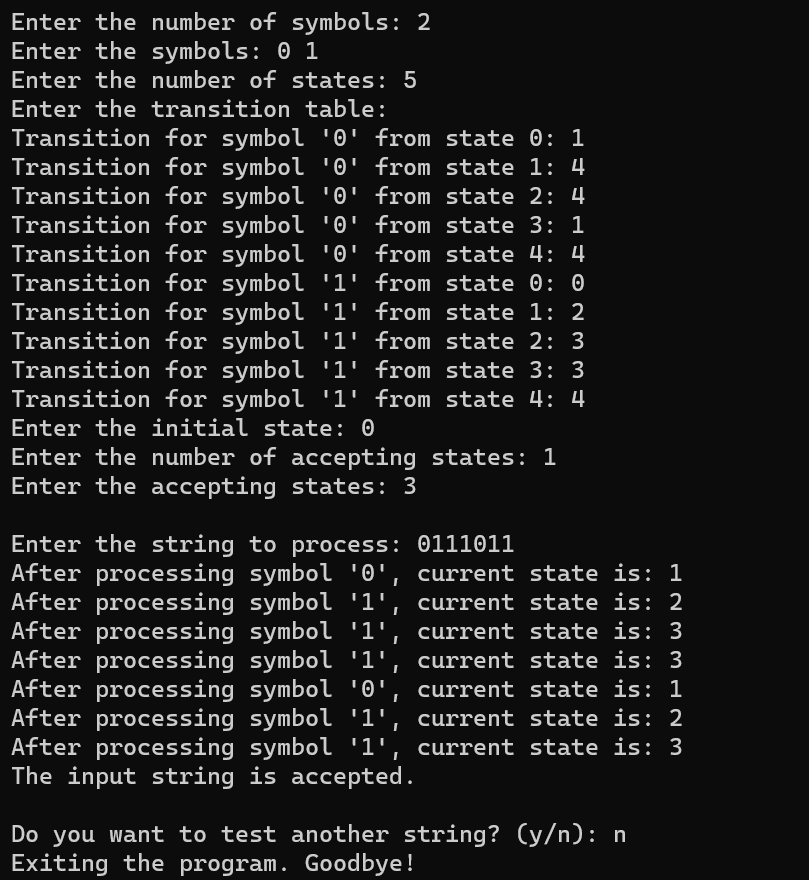
**Aim: String Validation Using Finite Automata**

**Objective:** To implement a program that validates a given string against rules defined in terms of finite automata.

**Screen Shot of Output:**



**String over 0 and 1 where every 0 immediately followed by 11**

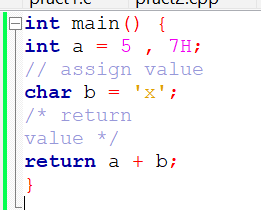
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**Conclusion:**

**Practical 3**

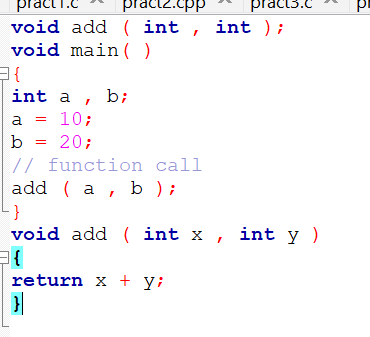
**Aim: Implementation of a Lexical Analyzer for C Language Compiler**

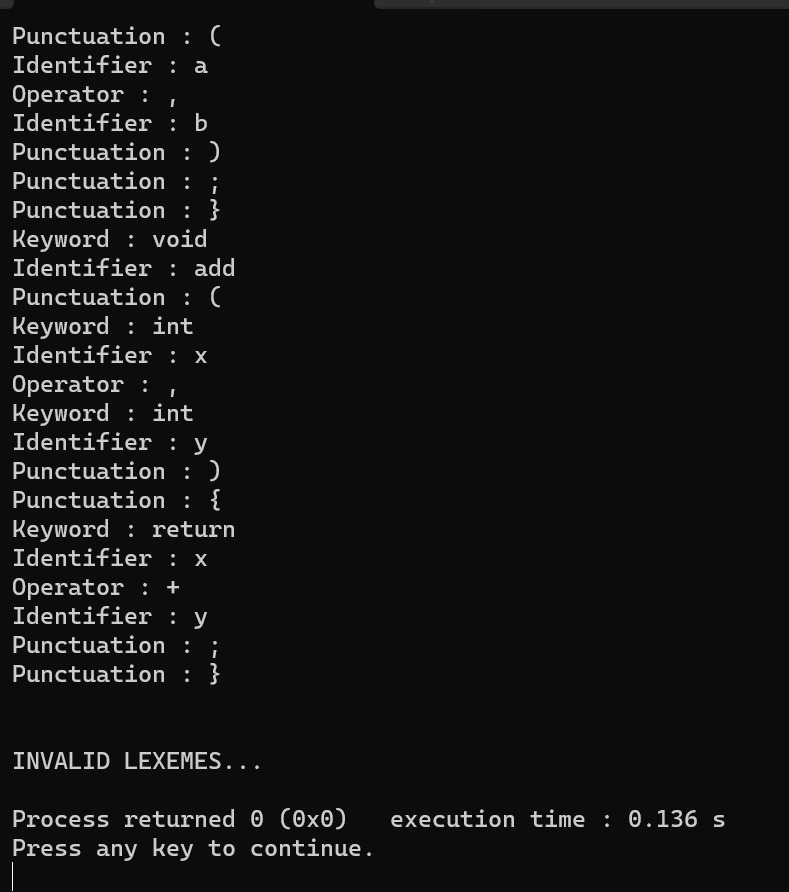
**Objective:** To design and implement a lexical analyser, the first phase of a compiler, for the C programming language. The lexical analyser should perform the following tasks: (1) tokenizing the input string (2) removing comments (3) removing white spaces (4) entering identifiers into the symbol table (5) generating lexical errors.

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**Screen Shot of Output:**



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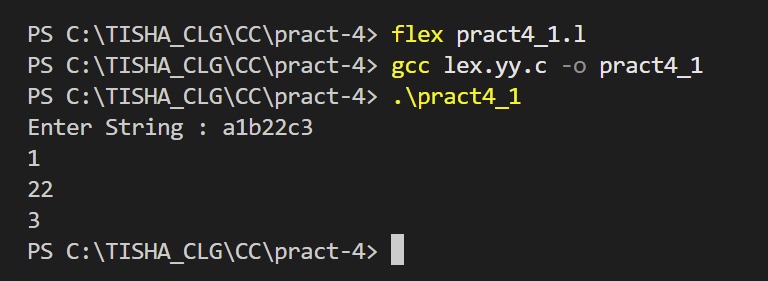


**Conclusion:**

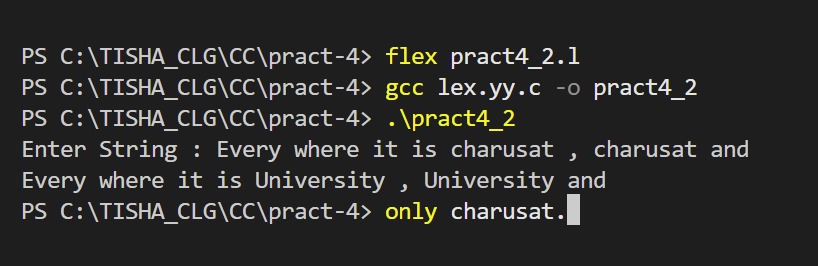
**Practical 4**

**Aim: String validation using Lax tool**

**Objective - 1** Write a program to identify and extract all numbers from input string and display them one by one in new line.



**Objective - 2** Write a program to replace the word "charusat" with “university” in the input text.

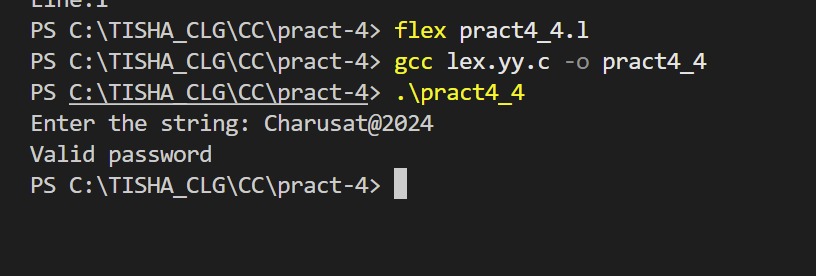


**Objective – 3** Write a program to count number of characters, word and lines from the input file.

A screenshot of a computer program

AI-generated content may be incorrect.

**Objective – 4** Write a program which validate the password as per given rules. ➢ length can be 9 to 15 characters ➢ includes lower case letter, upper case letter, digit, symbols (\*, ; # $ @) ➢ minimum count for each category must be o



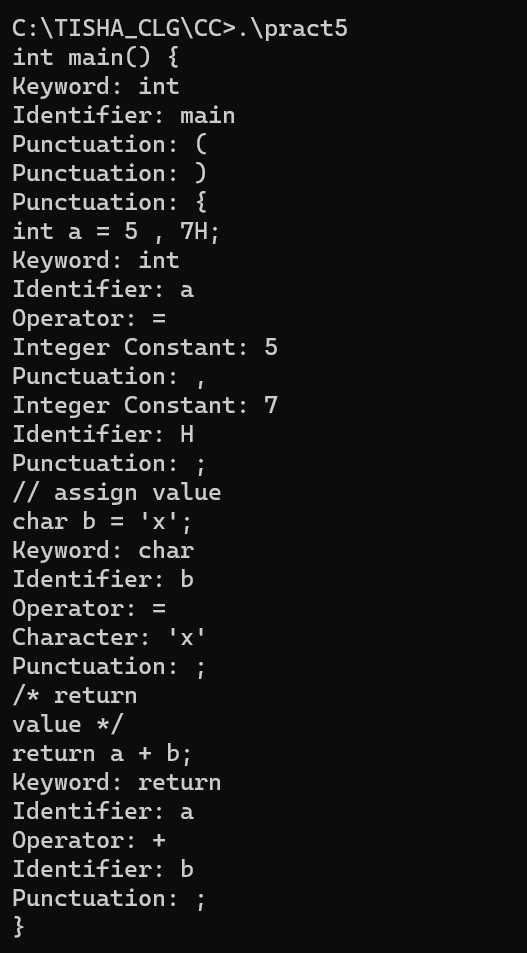
**Conclusion:**

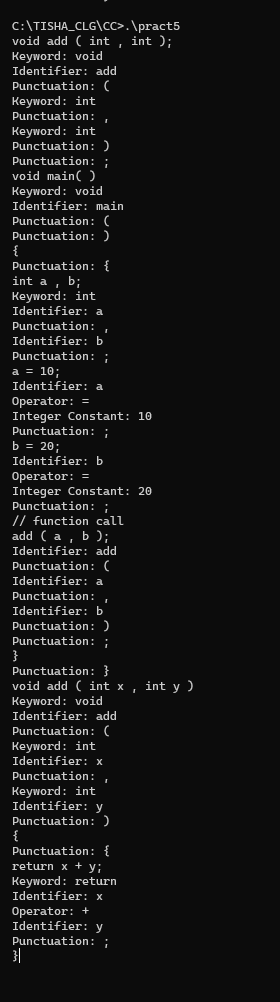
**Practical 5**

**Aim: Implementation of a Lexical Analyzer for C Language Compiler**

**Objective**: To design and implement a lexical analyser to perform 1st, 2nd, 3rd, and 5th task as per the list given in practical 2.

**Screen Shot of Output:**

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**Conclusion:**