

CSA1413- COMPILER DESIGN FOR INTERMEDIATE LANGUAGE

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All languages have Grammar. When people frame a sentence we usually say whether the sentence is framed as per the rules of the Grammar or Not. Similarly use the same ideology , implement to check whether the given input string is satisfying the grammar or not .

PROGRAM:

```
#include <stdio.h>

#include <string.h>

int i;

char str[100];

int S(); // Declaration

int match(char c) {
    if(str[i] == c) {
        i++;
        return 1;
    }
    return 0;
}

int S() {
    if(str[i] == 'a') {
        i++;
        if(S()) {
            if(str[i] == 'b') {
                i++;
                return 1;
            }
        }
    }
}
```

```

    }
}
return 0;
}
return 1; // epsilon
}

int main() {
    printf("Enter string: ");
    scanf("%s", str);
    i = 0;
    if(S() && str[i] == '\0') {
        printf("String satisfies grammar.\n");
    } else {
        printf("String does NOT satisfy grammar.\n");
    }
    return 0;
}

```

OUTPUT:

```

Enter string: aabb
String satisfies grammar.

```

```

=== Code Execution Successful ===

```