

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("%os", str);

    i = 0;

    if(S() && str[i] == '\0') {

        printf("String satisfies grammar.\n");

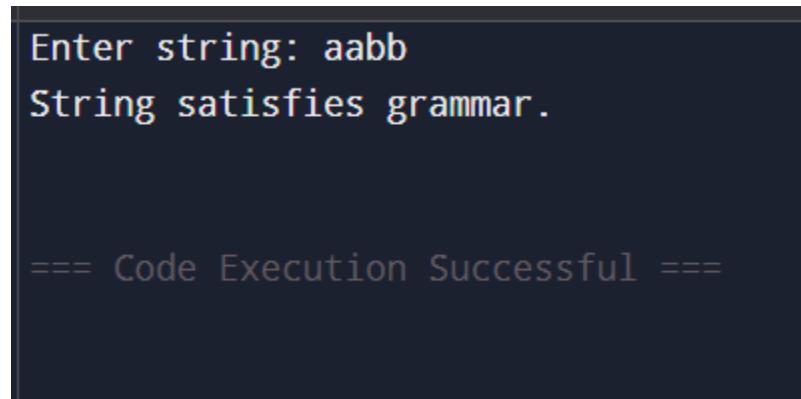
    } else {

        printf("String does NOT satisfy grammar.\n");

    }

    return 0;
}
```

OUTPUT:



```
Enter string: aabb
String satisfies grammar.

==== Code Execution Successful ===
```