AMRITA SCHOOL OF COMPUTING CHENNAI

AMRITA VISHWA VIDYAPEETHAM

22AIE113 ELEMENTS OF COMPUTING SYSTEMS-2

ASSESSMENT - 4

DONE BY:

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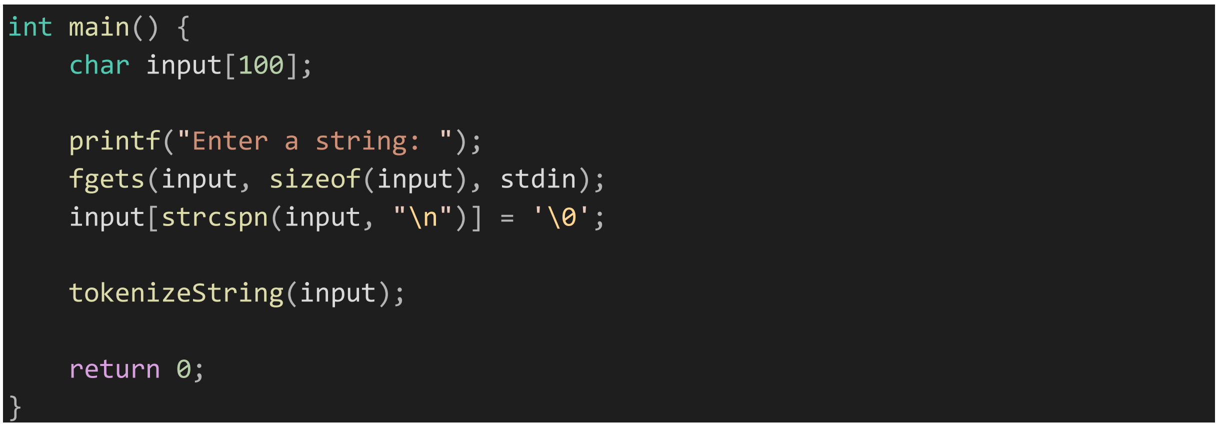
IMPLEMENT TOKENIZER

AIM:

To implement tokenizer using C Language.

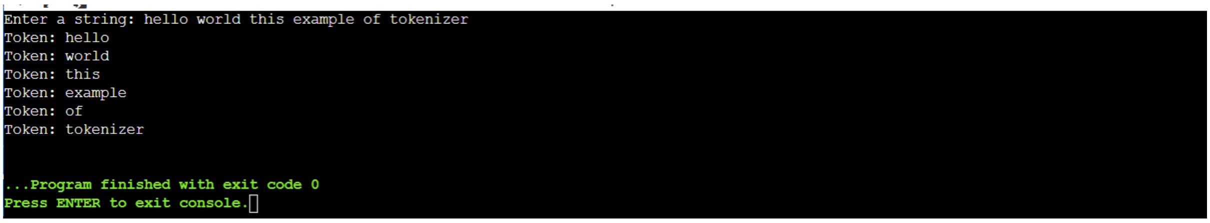
CODE:

```c
#include <stdio.h>
#include <string.h>
#include <stdbool.h>

#define MAX_TOKEN_LENGTH 100

bool isTokenChar(char c) {
    return (c >= 'a' && c <= 'z') || (c >= 'A' && c <= 'Z') || (c >= '0' && c <= '9');
}

void tokenizeString(const char* input) {
    int length = strlen(input);
    char token[MAX_TOKEN_LENGTH];
    int tokenIndex = 0;

    for (int i = 0; i < length; i++) {
        if (isTokenChar(input[i])) {
            token[tokenIndex++] = input[i];
        } else {
            if (tokenIndex > 0) {
                token[tokenIndex] = '\0';
                printf("Token: %s\n", token);
                tokenIndex = 0;
            }
        }
    }

    if (tokenIndex > 0) {
        token[tokenIndex] = '\0';
        printf("Token: %s\n", token);
    }
}
```



```c
int main() {
    char input[100];

    printf("Enter a string: ");
    fgets(input, sizeof(input), stdin);
    input[strcspn(input, "\n")] = '\0';

    tokenizeString(input);

    return 0;
}
```

OUTPUT:



```
Enter a string: hello world this example of tokenizer
Token: hello
Token: world
Token: this
Token: example
Token: of
Token: tokenizer


...Program finished with exit code 0
Press ENTER to exit console.
```

RESULT:

Thus a C program to implement Tokenizer using C Language was executed successfully.