**6) Develop a lexical Analyzer to test whether a given identifier is valid or not using C?**

**#include <stdio.h>**

**#include <ctype.h>**

**#include <string.h>**

**#define MAX\_LEN 100**

**int isValidIdentifier(char str[]) {**

**// Check if the string is empty**

**if (str[0] == '\0') {**

**return 0;**

**}**

**if (!(isalpha(str[0]) || str[0] == '\_')) {**

**return 0;**

**}**

**for (int i = 1; str[i] != '\0'; i++) {**

**if (!(isalnum(str[i]) || str[i] == '\_')) {**

**return 0**

**}**

**}**

**const char \*keywords[] = {**

**"int", "char", "float", "double", "if", "else", "for", "while", "return", "void"**

**};**

**for (int i = 0; i < sizeof(keywords) / sizeof(keywords[0]); i++) {**

**if (strcmp(str, keywords[i]) == 0) {**

**return 0**

**}**

**}**

**return 1;**

**}**

**int main() {**

**char identifier[MAX\_LEN];**

**printf("Enter an identifier to check: ");**

**scanf("%s", identifier);**

**if (isValidIdentifier(identifier)) {**

**printf("'%s' is a valid identifier.\n", identifier);**

**} else {**

**printf("'%s' is not a valid identifier.\n", identifier);**

**}**

**return 0;**

**}**

