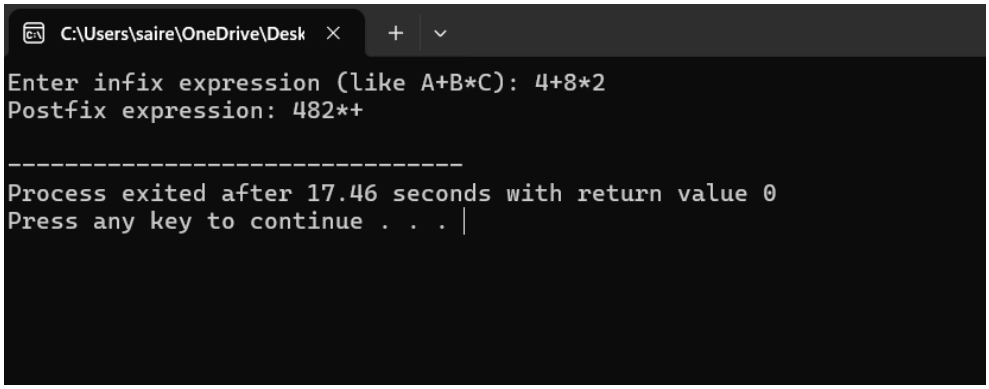
13. .Write a C program to implement the application of Stack (Notations)

```
#include <stdio.h>
#include <string.h>
#define SIZE 100
char stack[SIZE];
int top = -1;
void push(char c) {
   stack[++top] = c;
}
char pop() {
   return stack[top--];
}
int precedence(char c) {
   if (c == '*' || c == '/')
      return 2;
   if (c == '+' || c == '-')
      return 1;
   return 0;
}
int isOperator(char c) {
   return (c == '+' || c == '-' || c == '*' || c == '/');
}
void infixToPostfix(char infix[], char postfix[]) {
   int i, j = 0;
   char c;
 for (i = 0; infix[i] != '\0'; i++) {
      c = infix[i];
```

```
      if ((c >= 'A' && c <= 'Z') || (c >= 'a' && c <= 'z') || (c >= '0' && c <= '9')) {
         postfix[j++] = c;
      }
       else if (isOperator(c))
{
         while (top != -1 && precedence(stack[top]) >= precedence(c)) {
            postfix[j++] = pop();
         }
         push(c);
      }
   }
 while (top != -1) {
      postfix[j++] = pop();
   }
 postfix[j] = '\0';
}
int main()
 {
    char infix[SIZE], postfix[SIZE];
  printf("Enter infix expression (like A+B*C): ");
   scanf("%s", infix);
 infixToPostfix(infix, postfix);
 printf("Postfix expression: %s\n", postfix);
 return 0;
}
```

Output


C:\Users\saire\OneDrive\Desk
Enter infix expression (like A+B*C): 4+8*2
Postfix expression: 482*+

Process exited after 17.46 seconds with return value 0
Press any key to continue . . .