CODE:

#include <stdio.h>

#include <ctype.h>

#include <string.h>

const char \*s;

int i = 0, tempVar = 1;

char peek() { return s[i]; }

int eat(char c) { if (peek() == c) { i++; return 1; } return 0; }

char \*expr();

char\* newTemp() {

static char buf[10];

sprintf(buf, "t%d", tempVar++);

return strdup(buf);

}

char\* factor() {

if (eat('(')) {

char \*inside = expr();

eat(')');

return inside;

}

if (isalnum(peek())) {

static char buf[100];

int k = 0;

while (isalnum(peek())) buf[k++] = s[i++];

buf[k] = '\0';

return strdup(buf);

}

return NULL;

}

char\* term() {

char \*left = factor();

while (peek() == '\*' || peek() == '/') {

char op = s[i++];

char \*right = factor();

char \*temp = newTemp();

printf("%s = %s %c %s\n", temp, left, op, right);

left = temp;

}

return left;

}

char\* expr() {

char \*left = term();

while (peek() == '+' || peek() == '-') {

char op = s[i++];

char \*right = term();

char \*temp = newTemp();

printf("%s = %s %c %s\n", temp, left, op, right);

left = temp;

}

return left;

}

int main() {

char input[100];

printf("Enter expression: ");

scanf("%s", input);

s = input; i = 0; tempVar = 1;

char \*result = expr();

printf("Result stored in: %s\n", result);

return 0;

}

Screenshots:

