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1  #include <stdio.h>
2  #include <string.h>
3  int main() {
4      int n, i;
5      char a[50][10];
6      printf("Enter the number of intermediate codes: ");
7      scanf("%d", &n);
8      printf("Enter the 3-address codes (format: x=a+b):\n");
9      for (i = 0; i < n; i++) {
10         scanf("%s", a[i]);
11     }
12     printf("\nThe generated code is:\n");
13     for (i = 0; i < n; i++) {
14         printf("\n mov %c,R%d", a[i][2], i);
15         if (a[i][3] == '+')
16             printf("\n add %c,R%d", a[i][4], i);
17         else if (a[i][3] == '-')
18             printf("\n sub %c,R%d", a[i][4], i);
19         else if (a[i][3] == '*')
20             printf("\n mul %c,R%d", a[i][4], i);
21         else if (a[i][3] == '/')
22             printf("\n div %c,R%d", a[i][4], i);
23         printf("\n mov R%d,%c\n", i, a[i][0]);
24     }
25     return 0;
26 }
```

Enter the number of intermediate codes: 3

Enter the 3-address codes (format:  $x=a+b$ ):

$x=a+b+c$

$y=a*b*c$

$z=a-b+c$

The generated code is:

mov a,R0

add b,R0

mov R0,x

mov a,R1

mul b,R1

mov R1,y

mov a,R2

sub b,R2

mov R2,z

=== Code Execution Successful ===