C – ukazatele [Michalek]

Program pro výpis písmena před a po:

ukazatele.c ukazatele2.c

```c
#include <stdio.h>

void char_prev_next(const char needle, char *prev, char *next){
    *prev = needle - 1;
    *next = needle + 1;
}


int main(){

    char n = 'c';
    char x,y;

    char_prev_next(n, &x, &y);
    printf("%c <- %c -> %c\n", x, n, y);

    return 0;
}
```

Program na zlomky (nejmenší spol. jmenovatel):

```c
#include <stdio.h>
#include <math.h>


struct fraction{
    int nom;
    int den;
};

typedef struct fraction fraction_t;

fraction_t fraction_new(int nom, int den);
void fraction_reduce(fraction_t *f);
int gcd(int a, int b);

int main(){
    fraction_t f = fraction_new(42,7);


    printf("%d/%d\nspol.jmenovatel -> %d\n", f.nom, f.den,gcd(f.nom,f.den));
    fraction_reduce(&f);
    printf("Po zkraceni: %d/%d\n", f.nom,f.den);
    return 0;
}

fraction_t fraction_new(int nom, int den){

    fraction_t f = {.nom = 1, .den = 3};
    f.nom = nom;
    f.den = den;
    return f;

    return (fraction_t){
        .nom = nom,
        .den = den
    };

```

```
37
38  }
39
40  int gcd(int a, int b) {
41      int abs_a = abs(a);
42      int abs_b = abs(b);
43
44      int gcd = -1;
45
46      for (int i=1; abs_a > i || abs_b > i ;i++){
47          if (abs_a % i == 0 && abs_b % i == 0){
48              gcd = i;
49          }
50      }
51      return gcd;
52  }
53
54  void fraction_reduce(fraction_t *f){
55      int x_gcd = gcd(f->nom,f->den);
56      f->nom = f->nom / x_gcd;
57      f->den = f->den / x_gcd;
58  }
```