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#include <stdio.h>
#include <string.h>

int main()
{
    struct item {
        char barcode[6];
        const char *name;
        float price;
    };

    struct item tomatoes;
    printf("sizeof(struct item): %zu\n", sizeof(struct item));
    printf("sizeof(tomatoes): %zu\n", sizeof(tomatoes));

    struct item *tincan;
    printf("sizeof(struct item *): %zu\n", sizeof(struct item*));
    printf("sizeof(tincan): %zu\n", sizeof(tincan));

    tincan = NULL;
    printf("sizeof(peaches): %zu\n", sizeof(tincan));

    tincan = &tomatoes;
    printf("sizeof(peaches): %zu\n", sizeof(tincan));

    printf("sizeof(tomatoes.barcode): %zu\n", sizeof(tomatoes.barcode));
    printf("sizeof(tincan->barcode): %zu\n", sizeof(tincan->barcode));

    printf("sizeof(tomatoes.name): %zu\n", sizeof(tomatoes.name));
    printf("sizeof(tincan->name): %zu\n", sizeof(tincan->name));

    tomatoes.name = "The Greatest Tomatoes in a can";
    printf("sizeof(tomatoes.name): %zu\n", sizeof(tomatoes.name));
    printf("strlen(tomatoes.name): %zu\n", strlen(tomatoes.name));
```

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tomatoes.name = "TGT";
printf("sizeof(tomatoes.name): %zu\n", sizeof(tomatoes.name));
printf("strlen(tomatoes.name): %zu\n", strlen(tomatoes.name));

printf("sizeof(tomatoes.price): %zu\n", sizeof(tomatoes.price));
printf("sizeof(tincan->price): %zu\n", sizeof(tincan->price));

// pointer arithmetic
printf("tomatoes: %p\n", &tomatoes);
printf("tomatoes barcode: %zu\n", (void*)&(tomatoes.barcode) - (void*)&tomatoes);
printf("tomatoes name: %zu\n", (void*)&(tomatoes.name) - (void*)&tomatoes);
printf("tomatoes price: %zu\n", (void*)&(tomatoes.price) - (void*)&tomatoes);

return 0;
}
```