Postrehy tyzden 2

Statická alokácia

```
• • •
#include <stdio.h>
#define MAX_STUDENTS 100
#define BUFFER SIZE 1024
const int DAYS_IN_YEAR = 365;
int main() {
    int grades[MAX STUDENTS];
    int numbers[5] = \{0\};
    for (size_t i = 0; i < sizeof(numbers) / sizeof(numbers[0]); i++) {</pre>
    const int days_in_month[] = {31, 28, 31, 30, 31, 30, 31, 30, 31, 30, 31};
    return 0;
```

Statická alokácia

```
#include <stdio.h>
int main() {
    int probably_too_large[1000000];
    int small_array[5];
    int uninitialized_scores[10];
    printf("Enter array size: ");
    scanf("%d", &user_size);
    int dangerous array[user size]; // Extremely dangerous, can cause stack overflow
    void function_with_vla(int n) {
    return 0;
```

Formatovanie kodu

```
#include <stdio.h>
#define MAX 100
void print_arr(int a[],int size) // Bad: No space after comma
for(int i=0;i<size;i++) { // Bad: No spaces around operators</pre>
printf("%d ",a[i]); // Bad: Inconsistent indentation (should be one more level)
if((i+1)%10==0)printf("\n"); // Bad: Multiple statements on one line, no spaces around operators
printf("\n");
int sumArr(int a[],int size) { // Bad: Inconsistent function naming (snake case vs camelCase)
  int sum=0; // Bad: Inconsistent indentation (2 spaces here);
  for(int i=0;i<size;i++)</pre>
    sum+=a[i]; // Bad: No braces for single-line loop body
```

```
int main() {
int nums[MAX];
int size=0; // Bad: No space around = operator
printf("Enter up to %d numbers (enter -1 to stop):\n",MAX);
while(size<MAX) {</pre>
int num;scanf("%d",&num); // Bad: Multiple statements on one line
if(num==-1)break; // Bad: No spaces around operators, no braces for single-line if body
nums[size++]=num;} // Bad: Closing brace on same line as code
printf("The array contains:\n");
print_arr(nums, size); // Bad: No space after comma
int total=sumArr(nums, size); // Bad: No spaces around = operator
printf("The sum of all elements is: %d\n",total);
return 0;
```

C90 vs C99

```
• • •
#include <stdio.h>
int main() {
    int i = 0;
    printf("i is %d\n", i);
    int n = 5;
    int vla[n]; // C90: Error - array size must be constant
    int arr[5] = {[2] = 5, [4] = 10}; // C90: Error - invalid syntax
    int matrix[rows][cols]; // C90: Error - array size must be constant
    return 0;
```

```
• • •
#include <stdio.h>
int main() {
    for (int k = 0; k < 5; k++) { // C90: Error - declaration in for-loop
        printf("%d ", k);
    int n = 5;
    for (int i = 0; i < n; i++) {
        int temp[n]; // C90: Error - array size must be constant
    return 0;
```

```
• • •
void function_with_vla(int size, int arr[size]) { // C90: Error - invalid parameter
int main() {
    int size = 5;
    int array[size];
    function_with_vla(size, array);
    return 0;
```

```
#include <stdio.h>
#include <stdbool.h> // C99 only
#include <complex.h> // C99 only
int main() {
    long long int big_number = 1234567890123456789LL; // C90: Error - type not
    bool flag = true; // C90: Error - type not supported
    complex double z = 1.0 + 2.0*I; // C90: Error - type not supported
    printf("Big number: %lld\n", big_number);
    printf("Flag: %d\n", flag);
    printf("Complex number: %.2f + %.2fi\n", creal(z), cimag(z));
    return 0;
```

C90

Na kompilaciu použite:

gcc -Wall -Werror --pedantic -std=c90 -o <Zadanie>.exe

- Všetky vaše projekty budú skompilované pomocou gcc a týchto prepínačov.
- Taktiež použite gcc s prepínačmi pri zadaniach.
- Nedodržanie štandardu c90 bude penalizované!