Lab 12: Dynamic Arrays & programming in C

For UNT CSCE1030 Spring 2021

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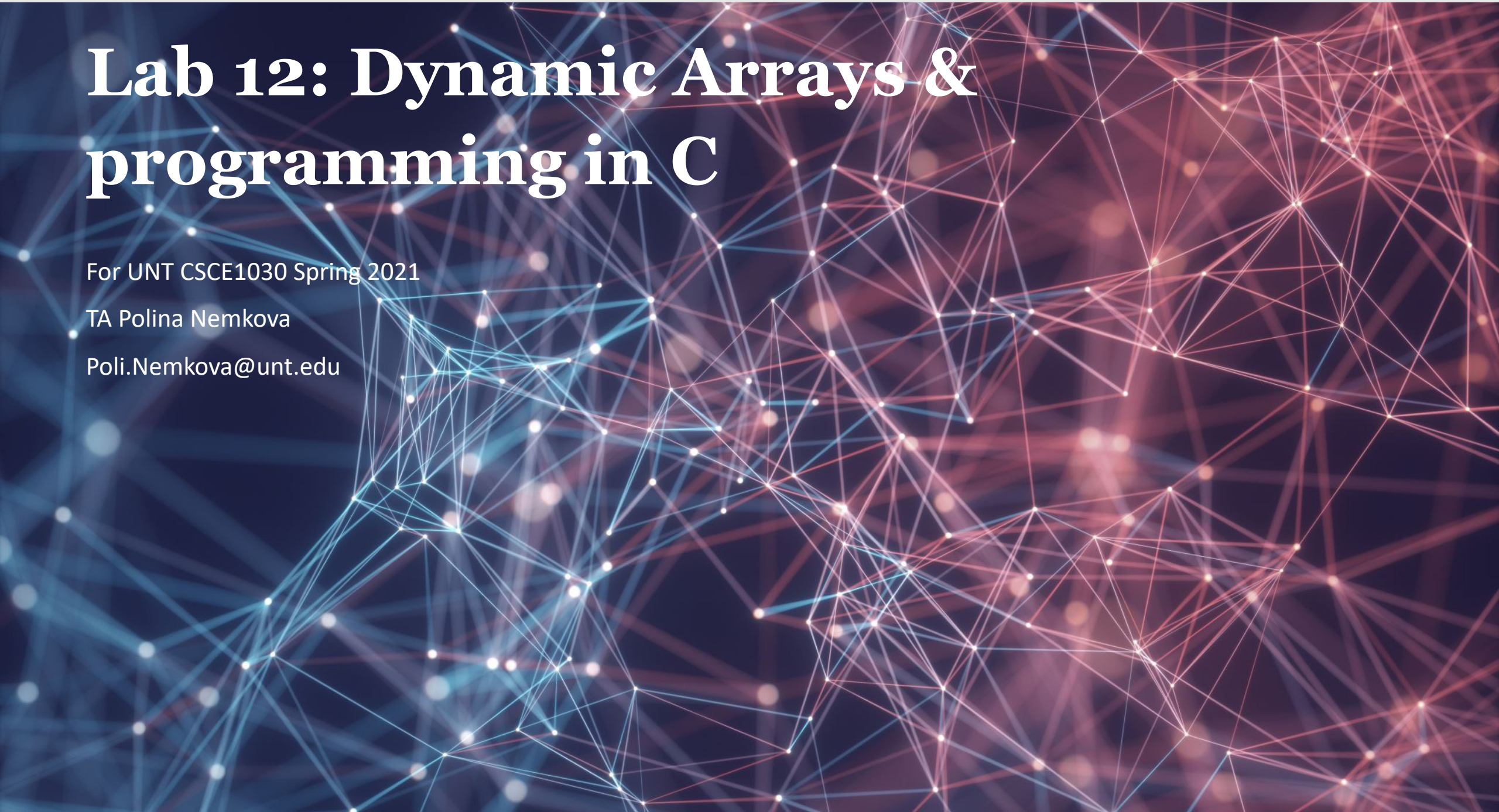
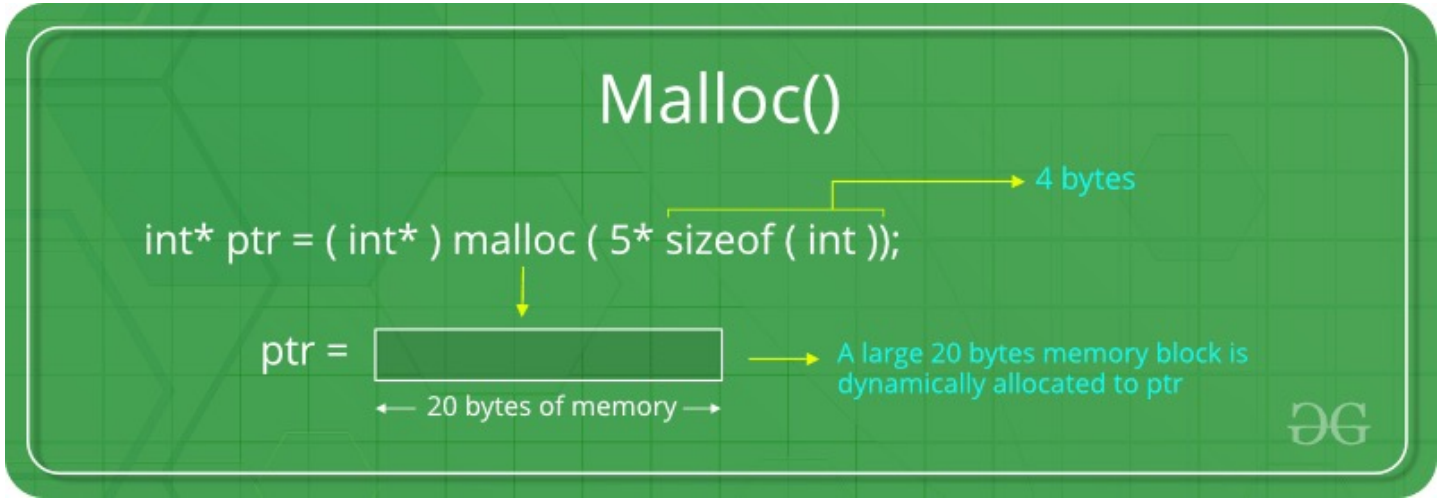


Dynamic Array in C

- Use library <stdlib.h>
- Instead of new and delete (like in C++) use: **malloc() / calloc()**

  and **free()** to delete the allocated memory.

- To add memory: **realloc()**



“malloc” or **“memory allocation”** method in C is used to dynamically allocate a single large block of memory with the specified size. It returns a pointer of type void which can be cast into a pointer of any form. It initializes each block with default garbage value.

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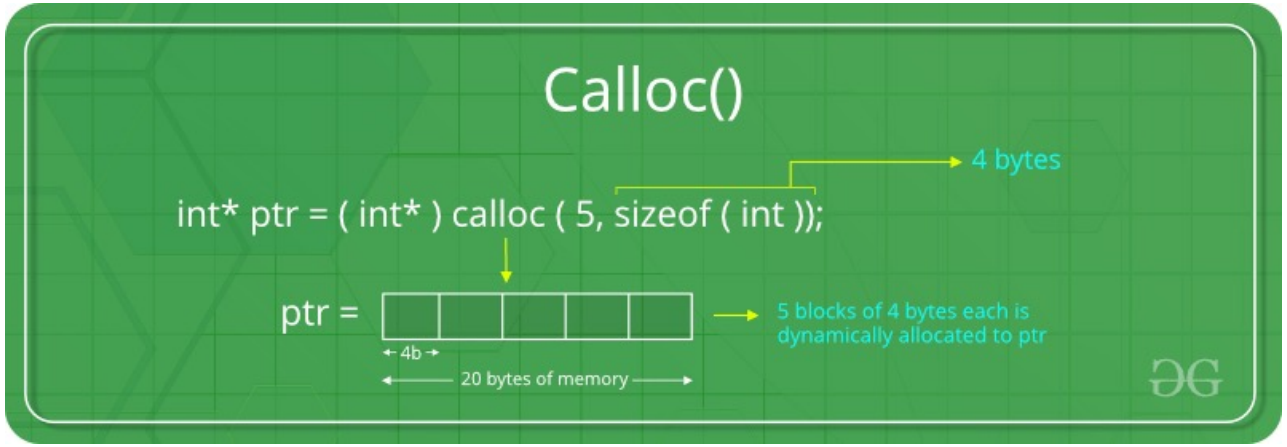

“calloc” or **“contiguous allocation”** method in C is used to dynamically allocate the specified number of blocks of memory of the specified type. It initializes each block with a default value ‘0’.

File I/O using C library functions

- Declare a file pointer.
- Open the desired file using the pointer.
- Read from or write to the file and finally,
- Close the file.

C macroses

- The C preprocessor is a macro preprocessor (allows you to define macros) that transforms your program before it is compiled. These transformations can be the inclusion of header file, macro expansions etc.