

# CS 12

## Midterm Review

### Terms

- interactive program
- batch program
- stream
- recursive solution of a function
- iterative solution of a function
- pointer
- pass-by-value
- pass-by-reference
- array
- pointer to function
- string
- structure
- class
- abstract data type

### Topics

- Formatting Output
  - C++, using cout
  - printf
  - precision
  - width
  - fill characters
  - iosflags - left, right, showpoint, showpos, fixed, scientific
  - printing in other bases - decimal, hexadecimal, octal
- Reading Input
  - extraction operator
  - get - reading a character

- get - reading a string
  - getline
- File Processing
  - declaring a file stream
  - opening
  - verification of open
  - reading from a file
  - writing to a file
  - closing
- Recursion vs. Iteration
- Multi-Dimensional Arrays
- Pointers
  - Indirect Assignment and Accessing
  - Pass-by-Reference
  - using pointers with arrays
  - pointers to functions
  - dynamic allocation
- Strings
  - declaring - using array format, using pointer format
  - initializing
  - manipulating - using string functions
    - \* strlen
    - \* strcpy
    - \* strncpy
    - \* strcmp
    - \* strncmp
    - \* strcat
    - \* strncat
    - \* strchr
    - \* strstr
    - \* strtok
- Structures
- Classes