CSCI 2270 Lecture Notes

1/16/2019

C++ Review

* Arrays
  + A contiguous set of memory locations reserved by program to store N elements of a particular data type
  + int arr[4];
    - allocates memory for 4 elements of int type
  + As function arguments
    - void foo(int arr[], int size)
    - passes the address of the first element of the array
    - pass by reference
* Structs
  + a c++ struct allows us to store multiple variables in a single entity – It is a way to organize data
  + struct AnimalPatient{

variables

};

* + Once a custom struct is defined, declaration is required
    - AnimalPatient p0;\
    - use the access operator to modify a certain member of the struct
      * p0.name = “Steve”;
* Array of Structs
  + AnimalPatient animalArr[N];
    - N is the length of the array
  + use the access operator in the same way
* File Input
  + How to read in external data
  + Use the fstream library
    - #inlcude <fstream>
  + Declare a stream object
    - ifstream inStream;
  + “connect” the stream object to an external file
    - instream.open(“filename”);
  + Read in data until a delimiter is reached
    - inStream >> var;
    - default delimiter is a whitespace
* Get Line function
  + custom delimiter
  + use getline() function
    - included in string library
    - getline(instream, arr[0], ‘,’);