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Cs 120

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Week 10 Notes

* Example of how to not skip first pet:

Int numpets;

Cout << “How many pets?”;

Cin >> numpets; // 3 [enter]

Cin.ignore();

Pet herd[numpets];

* Pointers
  + Memory is this long array of locations. Each individual location is 1 byte or 8 bits.
  + Ints take up 4 bytes or 32 bits of memory
    - Long ints example: long int big, leaves more memory
    - Doubles take more than 4 bytes
  + Each hexadecimal number counts as one byte
  + To reference a variable, you can get the address by using &
  + To dereference a variable, you can get the number at an address by using \*
  + Example

Cout << numpets; // 3

Cout << &numpets; // 0xaff45c10

Int \*p; // a pointer to an integer

P = &numpets; // 0xaff45c10

Cout << p; // 0xaff45c10

Cout << \*p; // 3

\*p = 7;

Cout << numpets; // 7

Cout << &p; // 0xaff45c18

* + Ex:

Int ar[3];

Ar[1] = 7;

* + Ex:

String \*s = &name;

Null is used t

* Pass by reference can be used in a function to change the value of variable in main.
  + Example:

Void function(int &);

Int main(){

Int x = 5; // x now equal to 5

Function(x); // x now equal to 10

}

Void function(int x){

X = 10; // x now equal to 10

}