



CMSC 106

Lecture Set #9

Set Started:

Tuesday, October 18, 2007



Variables: Scoping Rules and Storage Classes

- **Scopes**

- Where the variable is visible
- Options
 - local scope
 - global scope/file scope

- **Storage Classes**

- Where and how long the variable remains in existence
- Options
 - automatic
 - register
 - static
 - extern



Passing a Reference

- address = reference = where it is located in memory
- &
 - before variable name indicates its address rather than its contents
 - `scanf("%d",&a);`
- *
 - after a type name in a declaration, it means it is storing an address to something of that type
 - `int *p;`
 - before a variable name in lines that are not declarations of variables, it means to follow that pointer as a map to find the actual variable
 - `printf("%d\n",*p);`



Swapping values example

- `void swap1(int, int);`
- `void swap2(int*, int*);`
- `void swap3(int*, int*);`