

CMPS 2010 Lab 8

Fall 2024

Program 1 - Pointers (Guided Lab)

Write a program that uses an int pointer called hand to manipulate 3 variables: book, pencil, paper. You will use the hand pointer to change the value of book, pencil, or paper based on USER INPUT. The value stored in each variable represents a location:

```
//GLOBAL VARIABLES
const int FLOOR = 1,
        CHAIR = 2,
        DESK = 3;
```

For example, if hand is pointing to pencil, you could change the location of pencil using:

```
*hand = FLOOR;
```

Use the following functions:

```
//ask the user which object to grab, then return a pointer to that object
int* grab(int &book, int &pencil, int &paper);
```

```
//ask the user where they would like to move the object
void move(int* hand);
```

```
//show the location of each object & contents of hand
void showAll(int* hand, int &book, int &pencil, int &paper);
```

```
//helper function for showAll, outputs the location of a single object.
string show(int object);
```

The whole program should loop and give the user the following options:

- 1) Show All
- 2) Grab Object
- 3) Move Object
- 4) Exit Program

This is not an easy assignment, so I will be walking through it in class.

If you are unable to attend, please come see me or one of your fellow students for help.

Run this command from your [lab8](#) folder to submit your work.

```
/home/fac/paul/s/submit.sh
```