

Lab #6: Iterations

Getting started

Download lab06 materials from D2L (including this instruction and two starter codes)

Enter Mimir IDE

Change into the cse220 directory

Create a new directory called lab06

Change into the new directory

Uncompress and upload two starter codes to Mimir IDE (do not upload the whole zip file), save them in /home/(your_username)/cse220/lab06/

Implement the program below in your lab06 directory

Arrays Program 1

First, ask the user to read in an integer between 0 and 50. Use error checking to ensure that the number is in the correct range (Hint: use a **while** loop with **scanf** & **if**. Break the loop if the input integer is between 0 and 50, otherwise continue the loop until the user inputs a required one).

Next, read in n integer numbers, where n is the integer used in the first step, and store these numbers in an array. (Hint: **array**, **for** and **scanf**)

Lastly, read in one additional integer. (Hint: **scanf**)

Your program must then determine which pairs of integers in the array, if any, sum up to the last integer entered and print them. (Hint: **Double** for iteration, **if**, **printf**)

Example input/output:

```
user@mimir: ~/cse220/lab06 > ./program1
Please enter an integer between 0 and 50:
5
Please input 5 numbers (with a newline between them):
3
4
5
1
2
Please give me a pair-sum integer:
7
The following pairs sum to 7:
3 4
5 2
user@mimir: ~/cse220/lab06 > 
```

Arrays Program 2

First, ask the user to read in 2 integers between 0 and 50. Use error checking to ensure that the numbers are in the correct range. (Hint: **while**, **scanf**, **if**)

Next, read in 2 separate arrays number by number, with sizes determined by the first two integers entered. (Hint: **array**, **for** and **scanf**)

Your program must print all integers that appear in both arrays. (Hint: **Double** for iteration, **if**, **printf**)

Example input/output:

```
user@mimir: ~/cse220/lab06 > ./program2
Please enter an integer between 0 and 50 for array #1:
5
Please enter an integer between 0 and 50 for array #2:
3
Please input 5 numbers (with a newline between them) for array #1:
3
4
5
1
2
Please input 3 numbers (with a newline between them) for array #2:
1
11
3
The following integers appear in both arrays:
3
1
user@mimir: ~/cse220/lab06 > 
```