Practicing arrays 1

README

- Practice workbook for arrays in C
- See GitHub for script/solutions

Setup

Hide emphatic characters like ~, *

To **not** see the emphatic characters like ~ or * or / in the Org file text, run the following code chunk (or put the code in your `/.emacs` file): if successful, you should see `"t"` in the minibuffer.

```
(setq-default org-hide-emphasis-markers t)
```

This will only work for new buffers. If you don't put it in your `/.emacs` file, the command will only work for the current Emacs session.

Close and reopen this file to see an effect.

Change your theme

- In Emacs, type `M-x custom-themes`
- In the buffer that appears, select `Leuven`
- Select `Apply and Save Setting`
- This will work immediately

Declare and initialize array

- `[ ]`

  Declare two integer array `foo` of length `5` and initialize it with the values `1,2,3,4,5`. Print the first and the last value of `foo`.

  ```
  int foo[5] = {1,2,3,4,5};

  printf("%d %d", foo[0], foo[4]);
  ```

  ```
  1 5
  ```

Sample program: reversing numbers

Problem

- Enter five numbers and print them in reverse order.

Solution

Input file

You find the input file `numbers` in the `arrays` GDrive folder, or you can create it here.

```
echo '34 82 49 102 7' > numbers
```

Code

Fill in a few empty statements below:

- [ ] At the top, define a macro `N` with the value `5`
- [ ] Declare an array `a` of length `N`
- [ ] Complete the `scanf` function inside the `for` loop to accept the array values
- [ ] Complete the `for` loop to print the numbers: count down from `N-1` to `0`.

```
#define N 5   // define macro on this line

int a[N];    // declare array on this line
int i;

printf("Enter %d numbers: ", N);

for (i = 0; i < N; i++) {
  scanf("%d", &a[i]);   // complete scanf() function
 }
printf("%d %d %d %d %d\n", a[0], a[1], a[2], a[3], a[4], a[5]);

printf("In reverse order:");
for (i = N-1; i >= 0; i--) { // complete the for() expression
  printf(" %d", a[i]);
 }
printf("\n");
```

```
Enter 5 numbers: 34 82 49 102 7
In reverse order: 7 102 49 82 34
```

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