

CIS 1.5 Fall 2009 Lab V.2

1. The file `lots-of-numbers.txt` — which you can get from the instructor or download from the class website — contains some information which we can say are the ages of a number of people.
Write a program that reads in the first 15 of these ages from the file and places them into an array `ages`.
Print out the array.
2. Now add to your program a second array, an array of characters and call it `types`.
You are going to set up the value of the elements of `types` to reflect the values in `ages`.
If an element of `ages` is less than 18, indicating that the person is a child, you should set the corresponding element of `types` to `c`.
Thus if `ages[3]` is less than 18, set `types[3]` to be `c`.
Similarly, if the age is above 67, set the type to `r`, indicating “retiree”.
Finally, if the age is between 18 and 67, inclusive, then set the type to `a`, indicating “adult”.
Print out the array `types` and check that it is classifying people correctly.
3. Now use the array `types` to count how many:
 - children;
 - adults; and
 - retireesthere are in the array. Print out all three values and make sure they add up to 15.
4. Calculate the average age of the children and print it.
5. Calculate the average age of the adults and print it.
6. Calculate the average age of the retirees and print it.
7. Add a new array to your program, and call it `years`.
For each person represented by the array `ages`, do the following.
 1. If they are a child, calculate how many years until they become an adult. Store this in the corresponding element of `years`.
 2. If they are an adult, calculate how many years until they retire. Store this in the corresponding element of `years`.
 3. If they are a retiree, calculate how many years since they retired. Store this in the corresponding element of `years`.Print this information out and write it to a file.