

This page reserved for scratch of answers.

Question 1:

**Grade this question? \_ Yes \_ No**

Your task is to request a list of names to be typed by the user and then you should print the names in reverse order. You may use either `franca.h` or `iostream.h` at your convenience.

In order to do that, you should enter all the names into an array and then you should call a function “backwards” as explained below to create another array with the list in reverse order.

After doing that, you should write the list (in reverse order).

This is how the header for your function should look like:

```
void backwards(string names[],string backwardnames[],int listsize)
```

The array “names” contains a list of names that you should copy in REVERSE order to the array “backwardnames”. In other words, the first name in “names” should be copied to the last position in “backwardnames”, the second name in “names” should be copied to the next to last position in “backwardnames” and so on.

You don’t know beforehand how many names are in the list, but the third parameter “listsize” tells you exactly how many elements there are.

Important:

- Explain what you are doing
- Do NOT ask anything and do NOT write anything to the user

This page reserved for scratch or answers

Problem 2:

**Grade this question? \_ Yes \_ No**

You were hired by the Slug Express Credit Card services. Your boss wants you to make a list of customers and assign them a spending limit for their credit card.

You were told that there is a file (“customer.txt”) in the hard drive that contains:

- Customer name
- Yearly income
- Customer age (in years)

You should write a program that reads the contents of this file and displays a list showing the name of each customer and the spending limit.

To compute the credit limit, follow these directions:

- Customers that are 21 year old or younger – spending limit is \$1000.00
- Customers 22 or older: Spending limit depends on the income:
  - Income up and including \$30000 – spending limit is \$2000,00
  - Income over \$30000 and less or equal to \$50000 – spending limit is \$5000.00
  - Income over \$50000 – spending limit is \$10000.00

It is strongly suggested that you write at least one function that receives the income and age as parameter and returns the spending limit as a result.

Important:

Explain what you are doing!

This page reserved for scratch or answers

Problem 3:

**Grade this question? \_ Yes \_ No**

Your task is to compute the surface of rectangular-shaped rooms. You should ask the user to input the width and depth of the room. The surface can be computed by multiplying the width by the depth.

However, width and depth are given as feet and inches (remember 1 foot=12 inches); therefore, you need to convert each measurement to feet before you can multiply them (for example, 5 feet 6 inches is 5.5 feet).

Results can be given in decimal square feet (ex. 16.5 sq. ft.)

Important:

- Your program should keep on asking for widths and depths until told to stop.
- Explain what you are doing
- You can use either `franca.h` or `iostream.h`

This page reserved for scratch or answers

Problem 4:

**Grade this question? \_ Yes \_ No**

Your task is to write a function to assist your instructor to display letter grades to the students. You will receive student information and you should **return a letter grade** (A,B,C,D or F).

Your function will receive:

- An array of names (string names[])
- An array of integers (string scores[])
- An integer expressing the number of students in the list (int classsize)
- A name to search on the list (string onename)

The lists are already sorted in descending order of scores, meaning that scores[0] is the highest score, names[0] is the name of the student with the highest score etc.

All the values in names, scores, classsize and onename are already given to you, so **DO NOT** ask the user for input.

What you need to do:

- Search the list of names to find out the position where name matches “onename”. As you know, the lower the position, the better the letter grade for the student.
- Once you know the position, you can find the percent rank by dividing the position by the number of students in the class (classsize).
- Now you can determine the letter grade as follows:
  - Percent rank  $\leq 12\%$  letter grade is A
  - Percent rank  $>12\%$  and less than  $55\%$ , letter grade is B
  - Percent rank  $>55\%$  will get C if the score is greater or equal to 50, otherwise, D
  - If a name is not found, just return the letter grade F.

Important:

- Explain what you are doing
- Do not ask or write anything to the user

This page reserved for scratch or answers