README for lab 4

In this lab the program using Bayes' theorem estimating the parameter of distribution is implemented.

The folder contains:
1.bayes.cpp: which is the code of bayes estimation.
2.problem1.txt: the output of the successively estimated mean given question 1 priors.
3.problem2.txt: the output of the successively estimated mean given question 2 priors.
4.report.pdf: which is the report of lab 4
5.README: which is the documentation.
6.makefile: which helps the code compilation

To compile and run the code:

Linux environment is recommended.
To compile the code: type make in terminal, you can then find the bayes.x in your working directory
To run the code: type ./bayes.x in the terminal.

Output:

The size of data is: 10000 with mean value to be: 0.799366
Question 1: 143 samples needed before reaching +-0.05
Question 2: 153 samples needed before reaching +-0.05

Output for user defined test cases:
Test 1: 100 samples with normal distributions

The size of data is: 100 with mean value to be: 0
Question 1: 5 samples needed before reaching +-0.05
Question 2: 11 samples needed before reaching +-0.05

Test 2: 100 samples with random distributions

The size of data is: 100 with mean value to be: 3.895
Question 1: 9 samples needed before reaching +-0.05
Question 2: 17 samples needed before reaching +-0.05
The output data was checked to make sure the code meet expectation.