

## Data structures PA#2

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source\_code\_files/data\_structure\_pa2/src/main.cpp

In line 15-20: I declared a function called Hashfunction to calculate the hashvalue of the salted password.

In line 23-32: here is the message to show to users and let users to provide input. Simultaneously, I declared a string, and several vectors of string to store datas.

In line 33-68: here is the part to generate Dictionary.txt

In line 69-92: I use the data stored before by reading password.txt and the result of adding salt and hashing to search sequentially from the top of Dictionary.txt from the bottom. When the password is found, output the lines we have go through and the corresponding password and salt, otherwise, output that we have searched for 100000 lines and the information showing that the password is not found.

Conclusion: the data structure I used are vector and string, the algorithm I implement is exhaustively search the file (Dictionary.txt).