Exercise 9– Crazy Eights

Due Friday 23rd October 2020 by 23:55. (2 marks)

For this exercise, you are to solve the crazy eights puzzle using Dynamic Programming as presented in the week 10B lecture.

As usual, your program will prompt for the name of an input file and the read and process the data contained in this file.

The file contains the following data.

52 lines each containing the identity of a playing card in the form **RS**, where R is the *Rank* of the card (A, 2, 3, 4, 5, 6, 7, …, 10, J, Q, K) and S is the *Suit* (C, D, H, S).

E.g.

2C
XD
QS
…
AS
JD
5H

The order of cards in the list is the shuffled order of the deck you are to solve.

NOTE: the notation X is used to represent the ten of a suit. Thus, spades contains:
2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, XS, JS, QS, KS and AS.

You are to solve the deck (find the longest allowable sequence of cards) and output:

The length of the longest sequence;
The first card in the sequence;
The last card in the sequence.

Remember: The sequence **is** allowed to skip cards, it **is not** allowed to re-order cards.

As usual, do not use classes or STL.

Submit ex9.*ext* via moodle as usual where *ext* is one of c, cpp, java or py.