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CSC 340.01
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Assignment 01

Part 1: Tic Tac Toe Game

In case it is a draw:

```
Enter a column for player X
2
-------------
| X | O | X |
-------------
|   |   | X |
-------------
| O | X | O |
-------------
Enter a row for player O
1
Enter a column for player O
1
-------------
| X | O | X |
-------------
|   | O | X |
-------------
| O | X | O |
-------------
Enter a row for player X
1
Enter a column for player X
0
-------------
| X | O | X |
-------------
| X | O | X |
-------------
| O | X | O |
-------------
No winner

Process returned 0 (0x0)   execution time : 31.149 s
Press any key to continue.
```

In case there is a winner:

```
Enter a row for player X
0
Enter a column for player X
2
-------------
| X |   | X |
-------------
|   | X |   |
-------------
| O |   | O |
-------------
Enter a row for player O
2
Enter a column for player O
1
-------------
| X |   | X |
-------------
|   | X |   |
-------------
| O | O | O |
-------------
O player won

Process returned 0 (0x0)   execution time : 38.468 s
Press any key to continue.
```

Part 2: Credit Card Number Validator

```
 2  4444444444444448 is valid
 3  4444424444444440 is valid
 4  4110144110144115 is valid
 5  4114360123456785 is valid
 6  4061724061724061 is valid
 7  5500005555555559 is valid
 8  5115915115915118 is valid
 9  5555555555555557 is valid
10  6011016011016011 is valid
11   372449635398431 is not valid
12  4444544444444448 is not valid
13  4444434444444440 is not valid
14  4110145110144115 is not valid
15  4124360123456785 is not valid
16  4062724061724061 is not valid
17  5501005555555559 is not valid
18  5125915115915118 is not valid
19  5556555555555557 is not valid
20  6011116011016011 is not valid
21   372449635397431 is not valid
22  4444544444444448 is not valid
23  4444434444544440 is not valid
24  4110145110184115 is not valid
25  4124360123457785 is not valid
26  4062724061724061 is not valid
27  5541005555555559 is not valid
28  5125115115915118 is not valid
29  5556551555555557 is not valid
30  6011316011016011 is not valid
Press any key to continue . . .
```

Part 3:

At first I thought of using nested maps, but I figured out that it is not as easy as using in Java. So the best option, was to use a multimap<string, dictionaryItem>, such that dictionaryItem is the class I created to for every item. Each Item has a name, a description and a speech (noun, adjective, adverb or verb).
Even though in the first project, one of the best projects done was one which uses 2D string, I believe using a multimap would make the syntax look simpler. However, the first version I did for this program used 2D strings.