Exercise 10. Answer Sheet

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Problem 1. (40 points) Consider a 4-queens problem: On a 4x4 chess board put 4 queens in such way that they don't attack each other.

a) (20 points) How many solutions are there?

There are 2 solutions for the problem

b) (20 points) Draw your solutions using 4x4 table and put Q at the queen positions.

	Q		
			Q
Q			
		Q	

		Q	
Q			
			Q
	Q		

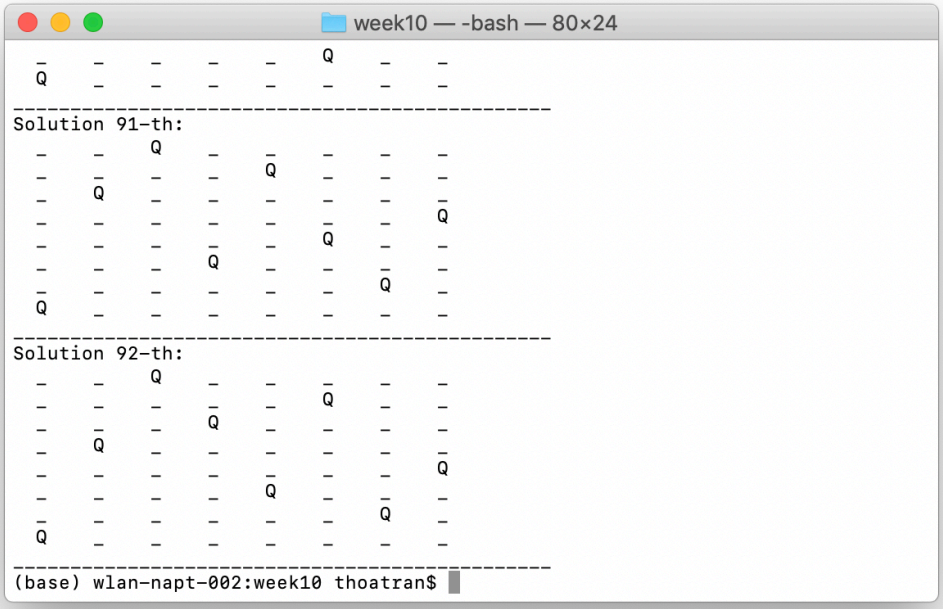
Problem 2. (60 points) Write a program implementing the 8-queens problem. Upload your code. Using your program answer the following questions?

To compile and run the file, run the following cammand lines:

```
g++ -std=c++11 -o eightQueensProb eightQueensProb.cpp
./eightQueensProb
```

To change the number of queens, change the value of N in the implementation code.

For example, with 8 queens the output will be:



a) (30 points) How many solutions are there?

There are 92 solutions

b) (30 points) Draw one of the solutions in the table below.

		Q					
					Q		
			Q				
	Q						
				Q			Q
						Q	
Q							