Question 1: [3 points]
Describe the equivalence classes of the indistinguishability relation $I_L$ for the language $L = \{ww \mid w \in \{0,1\}^*\}$. Is the language $L$ regular?

Question 2: [4 points]
Let $x^R$ denote the reverse of the string $x$. Use the pumping lemma to show that the language of palindrome $L = \{xx^R \mid x \in \{0,1\}^*\}$ is not regular.

Question 3: [3 points]
Find a minimal deterministic finite automata $M$ equivalent to the following one by applying the minimization algorithm:

![Diagram](attachment:image.png)

The final score is given by the sum of the points obtained.

Return your homework solution to Sander van Rijn (svr003@gmail.com). The deadline is on Tuesday October 7, 2014. This deadline is strict, thus homework solutions sent after the deadline will not be considered.

Remember to write in your solution your name, surname and student number.