## Homework Assignment \#7 <br> Due: July 3, 2012 at 7:00 p.m.

Submit your solution to this assignment as a pdf file using the submit command.

1. Let $\mathbb{N}$ be the set of all natural numbers.
(a) Prove that the set of all finite subsets of $\mathbb{N}$ is countable.
(b) Prove that the set of all subsets of $\mathbb{N}$ (i.e., $\mathscr{P}(\mathbb{N})$ ) is uncountable.
