Discrete Math Exam Problem: Boolean functions

Let $\mathbb{F}$ be the set of all functions with domain $\mathbb{N}$ and codomain $\{0, 1\}$. Is $\mathbb{F}$ countable? Prove your claim.

Remember to also upload a short video of yourself explaining your solution. Either visit `http://flipgrid.com/hdxdiscrete` and choose this problem from the list of problems, or go to the course website and click the FlipGrid logo next to this problem in the course calendar.