Proof that all natural numbers are interesting

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Abstract
Printable version of a sample proof that uses Lamport's proof style [1], illustrating how structured proofs can be converted to HTML pages via \texttt{LATEX2HTML} enriched with extensions for Lamport's proof style.

Theorem  All natural numbers are interesting.

Assume: $n$ a natural number.

Prove: $n$ is interesting.

\begin{enumerate}
\item A number is interesting if it is the smallest number not in an interesting set.
\item Case: $n = 0$
\begin{enumerate}
\item Proof: By assumption (0), since 0 is the smallest natural number not in $\emptyset$.
\item Case: $n > 0$
\begin{enumerate}
\item $n - 1$ is interesting
\item Proof: By (1)1, since case assumption (1) implies that $\{k : k \leq n - 1\}$ is interesting.
\end{enumerate}
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\end{enumerate}

Q.E.D.

Proof: Steps (1)2 and (1)3, assumption (0), and mathematical induction.

References