9. Assume by contradiction that there exists an infinite antichain in the Bruhat order of W. We will say that a sequence $w_1, w_2, w_3, \ldots$ of elements in W is "good" if $w_j \not\leq w_k$ for $j < k$. In particular every antichain is a "good" sequence. Lets construct a "good" sequence as follows: Let w_1 be an element of least length among all first elements of all "good" sequences. Let w_2 be an element of least length among all second elements of all "good" sequences starting with w_1. Let w_3 be an element of least length among all third elements of all "good" sequences starting with w_1, w_2. Continue this process up to infinity, so we get a "good" sequence $w_1, w_2, w_3, \ldots$. Fix reduced expressions for all the elements in this "good" sequence. Since there are only finitely many elements in S, there must be infinitely many of these expressions that start with the same letter $s \in S$, say $w_{i_1} = sw'_{i_1}, w_{i_2} = sw'_{i_2}, w_{i_3} = sw'_{i_3}, \ldots$ with $i_1 < i_2 < i_3 < \cdots$. Then by the subword property we have that $w'_{i_j} \not\leq w'_{i_k}$ for $j < k$. Then, again by the subword property, we have that $w_1, w_2, w_3, \ldots, w_{i_1 - 1}, w'_{i_1}, w'_{i_2}, w'_{i_3}, \ldots$ is a "good" sequence. But $l(w'_{i_1}) = l(w_{i_1}) - 1$, contradicting the choice of w_{i_1}.