Definition 1 (Execution). *Let π be an error trace of length n. An execution of π is a sequence of states $s_0, s_1 ... s_n$ such that $s_i, s_{i+1} \vDash T$, where T is the transition formula of $\pi[i]$.*

Definition 2 (Blocked Execution). *An execution of a trace π of size n is called a blocked execution, if there exists a sequence of states $s_0, s_1 ... s_j$ where $i < j \leq n$ such that $s_i, s_{i+1} \vDash T$ where T is the transition formula of $\pi[i]$ and there exists an assume statement in the trace π at position j such that $s_j \nRightarrow guard(\pi[j])$*

Definition 3 (Relevant Statement). *Let $\pi = st_1, ..., st_n$ be an error trace of length n where st_i is an assignment statement of the form $x := t$. The assignemnt statement at position i is relevant if there exists an execution $s_1, ... s_{n+1}$ of π and some value v such that every execution of the trace $x := v; \pi[i+1, n]$ starting in s_i is has a blocked execution.*

Theorem 1 (Relevancy of an assignment statement). *Let π be an error trace of length n and $\pi[i]$ be an assignment statement at position i having the form $x := t$, where x is a variable and t is an expression. Let P and Q be two predicates where $P = \neg WP(False; \pi[i, n]) \cap SP(True; \pi[1, i-1])$ and $Q = \neg WP(False; \pi[i+1, n])$. The statement $\pi[i]$ is relevant iff:*

$$P \nRightarrow WP(Q, havoc(x))$$