

$$\begin{array}{c}
\frac{\frac{\frac{\frac{\{1 = 1 \wedge n \geq 0\} f := 1 \{f = 1 \wedge n \geq 0\}}{s/w} \text{asgn}}{\{n \geq 0\} f := 1 \{f = 1 \wedge n \geq 0\}} \text{seq}}{\{n \geq 0\} f := 1 ; i := 1 \{f = 1 \wedge i = 1 \wedge n \geq 0\}} \text{seq}}{\{n \geq 0\} \mathbf{Fact} \{f = \mathit{fact}(n)\}} \text{seq} \\
\frac{\frac{\frac{\frac{\frac{\{f = 1 \wedge 1 = 1 \wedge n \geq 0\} i := 1 \{f = 1 \wedge i = 1 \wedge n \geq 0\}}{s/w} \text{asgn}}{\{f = 1 \wedge n \geq 0\} i := 1 \{f = 1 \wedge i = 1 \wedge n \geq 0\}} \text{seq}}{\{f = 1 \wedge i = 1 \wedge n \geq 0\} \mathbf{while} \ i \leq n \ \mathbf{do} \ \{f = 1 \wedge i = 1 \wedge n \geq 0\}} \text{seq}}{\{f = 1 \wedge i = 1 \wedge n \geq 0\} \mathbf{while} \ i \leq n \ \mathbf{do} \ \{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1\} \{f := f \cdot i ; i := i+1\} \{f = \mathit{fact}(n)\}} \text{seq}}{\{f = 1 \wedge i = 1 \wedge n \geq 0\} \mathbf{while} \ i \leq n \ \mathbf{do} \ \{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1\} \{f := f \cdot i ; i := i+1\} \{f = \mathit{fact}(n)\}} \text{seq}} \text{whl} \\
\frac{\frac{\frac{\frac{\frac{\frac{\frac{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i ; i := i+1 ; \{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1\}}{s/w} \text{seq}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i ; i := i+1 ; \{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1\}} \text{seq}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{seq}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i ; i := i+1 ; \{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1\}} \text{seq}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{seq}} \text{asgn} \\
\frac{\frac{\frac{\frac{\frac{\frac{\frac{\{f \cdot i = \mathit{fact}(i-1) \cdot i \wedge 1 \leq i \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i-1) \cdot i \wedge 1 \leq i \wedge i \leq n\}}{s/w} \text{asgn}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{asgn}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{asgn}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{asgn}}{\{f = \mathit{fact}(i-1) \wedge 1 \leq i \wedge i \leq n+1 \wedge i \leq n\} f := f \cdot i \{f = \mathit{fact}(i) \wedge 1 \leq i \wedge i \leq n\}} \text{asgn}} \text{asgn}
\end{array}$$