

Synthesized solution for benchmark 03syscalls.c

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solution
├── (Complete), cond  $b_{28}$ :  $x == 0$ 
│   ├──  $\left\{ \begin{array}{l} \text{Case } b_{28} : \\ k_1 = K_{fv\_1} = 1000; \cdot L_c = \text{array\_alloc}(fv\_1); \cdot (b_x == 0 \cdot P_{fv\_2} = 1; \cdot W() = \text{show}(fv\_2); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot (a_b != 0 \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;) * \neg a_b != 0 \cdot A_r = \text{array\_read}(c); \\ k_2 = T_a = \text{nondet}(); \cdot M_c = \text{array\_alloc}(a); \cdot (b_x == 0 \cdot E_{fv\_3} = 2; \cdot O() = \text{show}(fv\_3); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot ((a_b != 0 \wedge c_a > b) \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ (\neg a_b != 0 \vee \neg c_a > b) \cdot A_r = \text{array\_read}(c); \end{array} \right.$ 
│   │   └── AComplete
│   │       └──  $\left\{ \begin{array}{l} \text{Axioms} : \{K = 1, L = T, M = 1, P = 1, W = 1, !a = !c, Q = 1, U = 1\} \\ k_1 = K_{fv\_1} = 1000; \cdot L_c = \text{array\_alloc}(fv\_1); \cdot (b_x == 0 \cdot P_{fv\_2} = 1; \cdot W() = \text{show}(fv\_2); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot (a_b != 0 \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ \neg a_b != 0 \cdot A_r = \text{array\_read}(c); \\ k_2 = T_a = \text{nondet}(); \cdot M_c = \text{array\_alloc}(a); \cdot 1 \cdot (b_x == 0 \cdot Q_{fv\_3} = 2; \cdot U() = \text{show}(fv\_3); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot ((a_b != 0 \wedge c_a > b) \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ (\neg a_b != 0 \vee \neg c_a > b) \cdot A_r = \text{array\_read}(c); \end{array} \right.$ 
│   └──  $\left\{ \begin{array}{l} \text{Case } \neg b_{28} : \\ k_1 = K_{fv\_1} = 1000; \cdot L_c = \text{array\_alloc}(fv\_1); \cdot (b_x == 0 \cdot P_{fv\_2} = 1; \cdot W() = \text{show}(fv\_2); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot (a_b != 0 \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;) * \neg a_b != 0 \cdot A_r = \text{array\_read}(c); \\ k_2 = T_a = \text{nondet}(); \cdot M_c = \text{array\_alloc}(a); \cdot (b_x == 0 \cdot E_{fv\_3} = 2; \cdot O() = \text{show}(fv\_3); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot ((a_b != 0 \wedge c_a > b) \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ (\neg a_b != 0 \vee \neg c_a > b) \cdot A_r = \text{array\_read}(c); \end{array} \right.$ 
│       └── AComplete
│           └──  $\left\{ \begin{array}{l} \text{Axioms} : \{K = 1, L = T, M = 1, P = 1, W = 1, !a = !c, Q = 1, U = 1\} \\ k_1 = K_{fv\_1} = 1000; \cdot L_c = \text{array\_alloc}(fv\_1); \cdot (b_x == 0 \cdot P_{fv\_2} = 1; \cdot W() = \text{show}(fv\_2); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot (a_b != 0 \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ \neg a_b != 0 \cdot A_r = \text{array\_read}(c); \\ k_2 = T_a = \text{nondet}(); \cdot M_c = \text{array\_alloc}(a); \cdot 1 \cdot (b_x == 0 \cdot Q_{fv\_3} = 2; \cdot U() = \text{show}(fv\_3); + \neg b_x == 0 \cdot 1) \cdot G_b = \text{getchar}(); \cdot ((a_b != 0 \wedge c_a > b) \cdot Y() = \text{array\_write}(c, b); \cdot B_b = b \text{ -i,? } 1;)* \\ (\neg a_b != 0 \vee \neg c_a > b) \cdot A_r = \text{array\_read}(c); \end{array} \right.$ 

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Remaining 154 solutions ommitted for brevity.