

```

1  class System {
    STATE_MACHINE(Machine) {
3      INITIAL_STATE(S1,S1_entry,S1_exit,NULL){
        INITIAL(Initial1);
5      STATE(S11, S11_entry, S11_exit) {
        STATE(S111, S111_entry, S111_exit);
7      };
        CHOICE(c1);
9      EXIT_POINT(ex1);
    };
11     STATE(S2, S2_entry, S2_exit) {
        SHALLOW_HISTORY(h1);
13     STATE(S21, S21_entry, S21_exit);
        FINAL_STATE(S2_final);
15     };
    STATE(S3, S3_entry, S3_exit);
17     FINAL_STATE(FinalState1);
    //Event table definitions
19     //Transition table
    TRANSITION_TABLE {
21         TRANSITION(S111,c1,NULL,NULL,NULL);
        TRANSITION(c1,ex1,NULL,NULL,NULL);
23         TRANSITION(c1,S3,NULL,NULL,NULL);
    }
25 };
    void S1_entry() {
27         //Entry action for S1
    }
29     //...
    //class member declarations
31 };

```



a

```

1  class System {
    STATE_MACHINE(Machine) {
3      INITIAL_STATE(S1,S1_entry,S1_exit,NULL){
        INITIAL(Initial1);
5      STATE(S11, S11_entry, S11_exit) {
        STATE(S111, S111_entry, S111_exit);
7      };
        CHOICE(c1);
9      };
    STATE(S2, S2_entry, S2_exit) {
        DEEP_HISTORY(dh1);
11     STATE(S21, S21_entry, S21_exit) {
        STATE(S211, S211_entry, S211_exit);
13     };
    };
15     FINAL_STATE(FinalState1);
    //Event table definitions
    //Transition table
19     TRANSITION_TABLE {
        TRANSITION(S111,c1,NULL,NULL,NULL);
21         TRANSITION(c1,dh1,NULL,NULL,NULL);
        TRANSITION(c1,FinalState1,NULL,NULL,NULL);
23     }
    };
25     void S1_entry() {
        //Entry action for S1
27     }
    //...
29     //class member declarations
    };
31 };

```

b