

2) edge Coverage: TC: $\langle a, a, b, a, d, C, d, C, b, a \rangle$

$\langle b, a, b, a, b, a, b, a \rangle$

ADUP:

T.C 1: $\langle \text{start}, a, b, a, d, a, a \rangle$,

states $\langle \text{Normal}(\text{Time}), \text{Normal}(\text{Date}), \text{Chime Alarm set}(\text{Alarm}),$

$\text{Chime Alarm set}(\text{chime}), \text{Normal}(\text{Time}), \text{Normal}(\text{Date}) \rangle$

T.C 2: $\langle \text{start}, C, b, a, b, a, b, a, b, a, b, a, a \rangle$,

States $\langle \text{Normal}(\text{Time}), \text{update}(\text{min}), \text{update min}(m++)$,

$\text{update}(\text{hour}), \text{update hour}(h++)$,

$\text{update}(\text{day}), \text{update day}(D++)$,

$\text{update}(\text{month}), \text{update month}(M++)$,

$\text{update}(\text{year}), \text{update year}(y++)$,

$\text{Normal}(\text{Time}), \text{Normal}(\text{Date}) \rangle$

T.C 3: $\langle \text{start}, C, b, d, a \rangle$,

$\text{Normal}(\text{Date})$

States $\langle \text{Normal}(\text{Time}), \text{update}(\text{min}), \text{update min}(m++)$,

$\text{Normal}(\text{Time}), \text{Normal}(\text{Date}) \rangle$

T.C 4: $\langle \text{start}, C, a, b, d, a \rangle$,

States $\langle \text{Normal}(\text{Time}), \dots, \text{update}(\text{hour}), \text{update hour}(h++)$,

$\text{Normal}(\text{Time}) \rangle, \text{Normal}(\text{Date}) \rangle$

T.C 5: ($\langle \text{start}, C, a, a, b, d, a \rangle$,

states $\langle \dots, \dots, \text{update}(\text{hour}), \text{update}(\text{day}), \text{update day}(D++), \dots, \dots \rangle$)

T.C 6: ($\langle \text{start}, C, a, a, a, b, d, a \rangle$,

states $\langle \dots, \dots, \dots, \text{update}(\text{month}), \text{update month}(M++), \dots, \dots \rangle$)