```c
systemState = EVENT_PROCESSING;
if (states[S11_ID].actives[0]==S111_ID
&&(currentEvent->stateId==S111_ID)){
  Exit(states[S11_ID].actives[0]);
  states[S11_ID].actives[0]=STATE_MAX;
  Exit(states[S1_ID].actives[0]);
  states[S1_ID].actives[0]=STATE_MAX;
  if (guard1) {
    Exit(S1_ID);
    activeStateID = S3_ID;
    Entry(S3_ID);
  } else {
    Exit(S1_ID);
    activeStateID = S2_ID;
    Entry(S2_ID);
    unsigned int loc_ActiveId;
    if(states[S2_ID].previousStates[0]
          !=STATE_MAX) {
      loc_ActiveId=states[S2_ID]
              .previousStates[0];
    } else {
      loc_ActiveId = S21_ID;
    }
    states[S2_ID].actives[0]=
            loc_ActiveId;
    Entry(loc_ActiveId);
  }
  systemState = EVENT_CONSUMED;
}
```
(a)

```c
systemState = EVENT_PROCESSING;
if (states[S11_ID].actives[0]==S111_ID
&&(currentEvent->stateId==S111_ID)){
  Exit(states[S11_ID].actives[0]);
  states[S11_ID].actives[0]=STATE_MAX;
  Exit(states[S1_ID].actives[0]);
  states[S1_ID].actives[0]=STATE_MAX;
  Exit(S1_ID);
  if (guard1) {
    activeStateID = S3_ID;
    Entry(S3_ID);
  } else {
    activeStateID = S2_ID;
    Entry(S2_ID);
    unsigned int loc_ActiveId;
    if(states[S2_ID].previousStates[0]
          !=STATE_MAX) {
      loc_ActiveId =
        states[S2_ID].previousStates[0];
    } else {
      loc_ActiveId = S21_ID;
    }
    states[S2_ID].actives[0]=
            loc_ActiveId;
    Entry(loc_ActiveId);
  }
  systemState = EVENT_CONSUMED;
}
```
(b)

```c
systemState = EVENT_PROCESSING;
if (states[S11_ID].actives[0]==S111_ID
&& (currentEvent->stateId==S111_ID)){
  Exit(states[S11_ID].actives[0]);
  states[S11_ID].actives[0]=STATE_MAX;
  Exit(states[S1_ID].actives[0]);
  states[S1_ID].actives[0]=STATE_MAX;
  if (guard1) {
    Exit(S1_ID);
    activeStateID = STATE_MAX;
  } else {
    Exit(S1_ID);
    activeStateID = S2_ID;
    Entry(S2_ID);
    unsigned int S2_Region1_dh1;
    if (states[S2_ID].previousStates[0]
          != STATE_MAX) {
      S2_Region1_dh1 =
        states[S2_ID].previousStates[0];
      Entry(S2_Region1_dh1);
      if (S21_ID==S2_Region1_dh1) {
        unsigned int S21_Region1_dh1 =
        states[S21_ID].previousStates[0];
        Entry(S21_Region1_dh1);
      }
    } else {
      states[S2_ID].actives[0]=S21_ID;
      Entry(S21_ID);
      states[S21_ID].actives[0]=S211_ID;
      Entry(S211_ID);
    }
  }
  systemState = EVENT_CONSUMED;
}
```
(c)

```c
systemState = EVENT_PROCESSING;
if (states[S11_ID].actives[0]==S111_ID
&&(currentEvent->stateId==S111_ID)){
  Exit(states[S11_ID].actives[0]);
  states[S11_ID].actives[0] = STATE_MAX;
  Exit(states[S1_ID].actives[0]);
  states[S1_ID].actives[0] = STATE_MAX;
  Exit(S1_ID);
  if (guard1) {
    activeStateID = S3_ID;
    Entry(S3_ID);
  } else {
    activeStateID = S2_ID;
    Entry(S2_ID);
    unsigned int loc_ActiveId;
    if (states[S2_ID].previousStates[0]
          !=STATE_MAX) {
      loc_ActiveId =
        states[S2_ID].previousStates[0];
    } else {
      loc_ActiveId = S21_ID;
    }
    states[S2_ID].actives[0]=loc_ActiveId;
    Entry(loc_ActiveId);
  }
  systemState = EVENT_CONSUMED;
}
```
(d)