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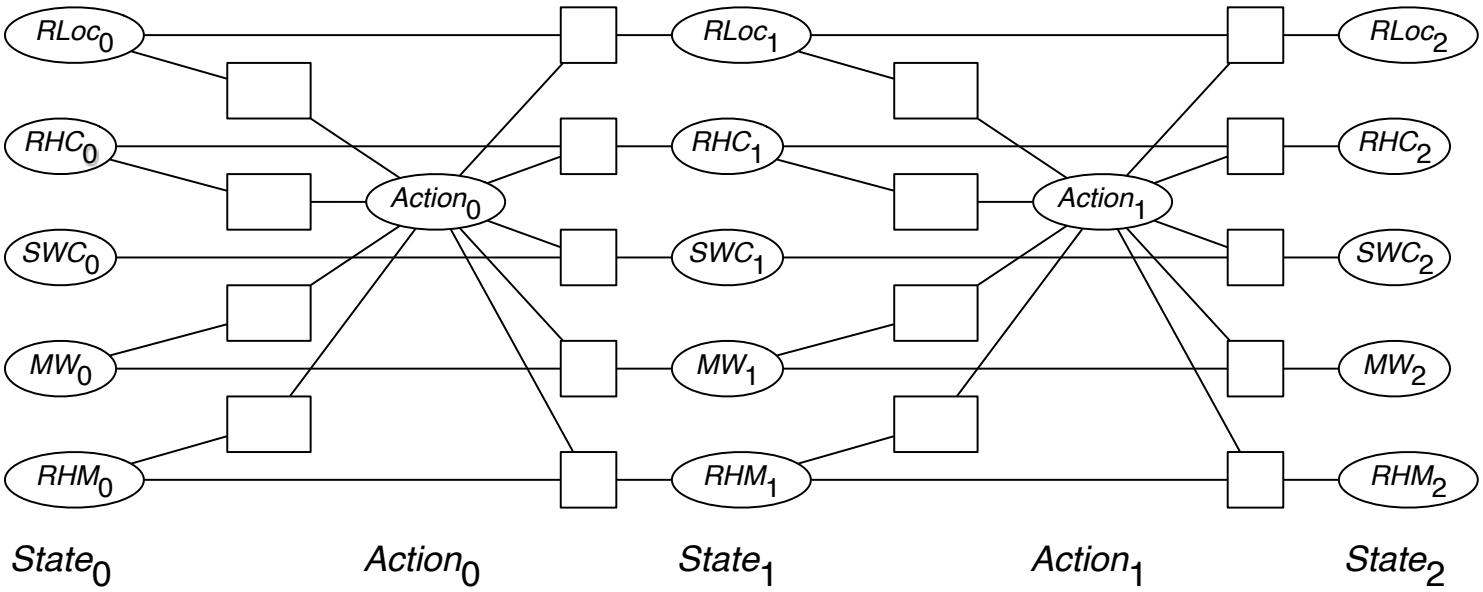
- Search over planning horizons (number of time steps).
- For each planning horizon, create a CSP constraining possible actions and features

CSP Variables

Choose a planning horizon k.

- Create a variable for each state feature and each time from 0 to k.
- Create a variable for the action for each time in the range 0 to $k-1$.

CSP for Delivery Robot for a planning horizon of 2



$RLoc_i$ — Rob's location
RHC_i — Rob has coffee
SWC_i — Sam wants coffee
MW_i — Mail is waiting
RHM_i — Rob has mail

$Move_i$ — Rob's move action
PUC_i — Rob picks up coffee
$DelC$ — Rob delivers coffee
PUM_i — Rob picks up mail
$DelM_i$ — Rob delivers mail

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- initial state constraints that are usually domain constraints on the initial state (at time 0).
- goal constraints that constrains the final state to be a state that satisfies the goals that are to be achieved.

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