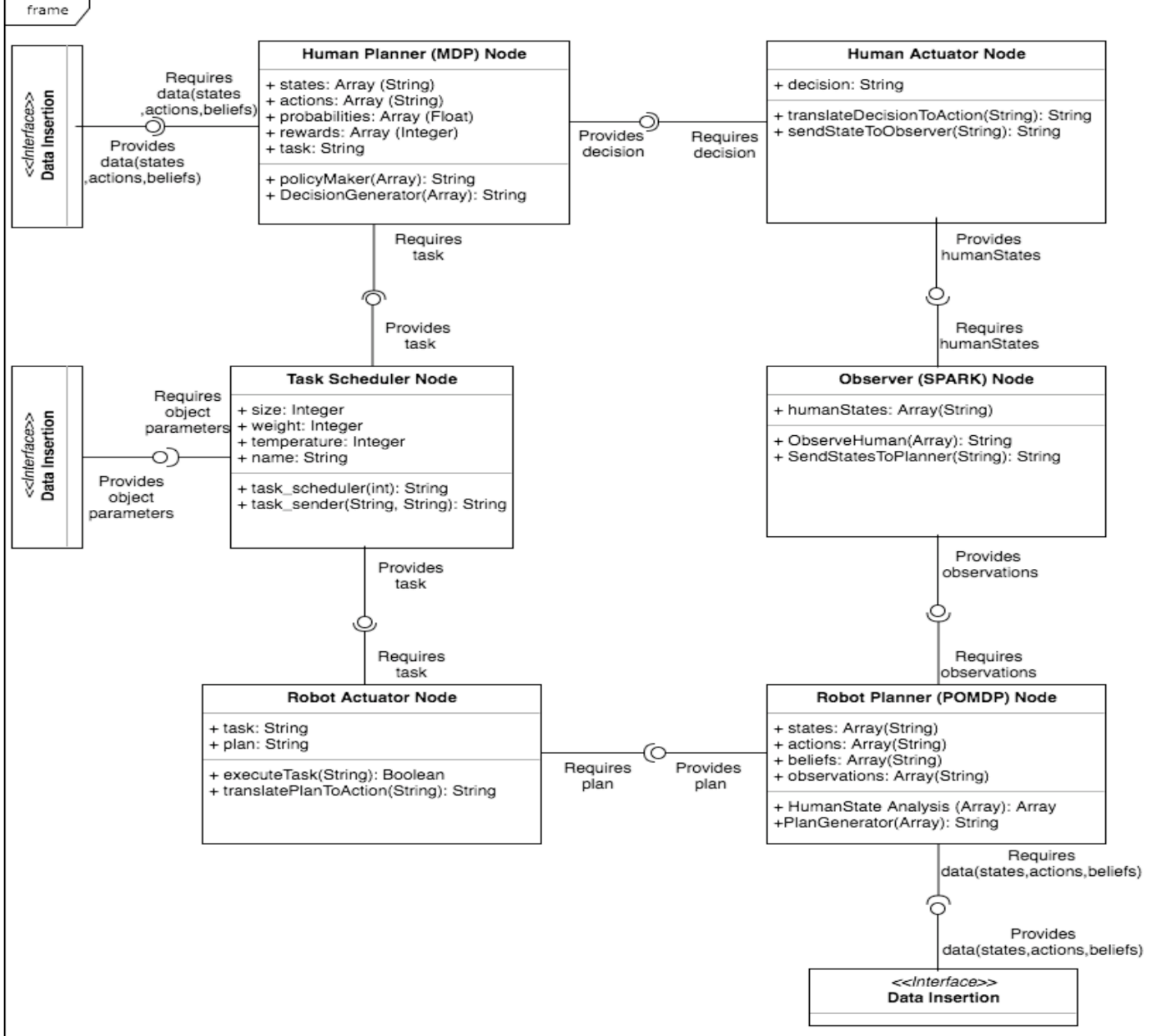


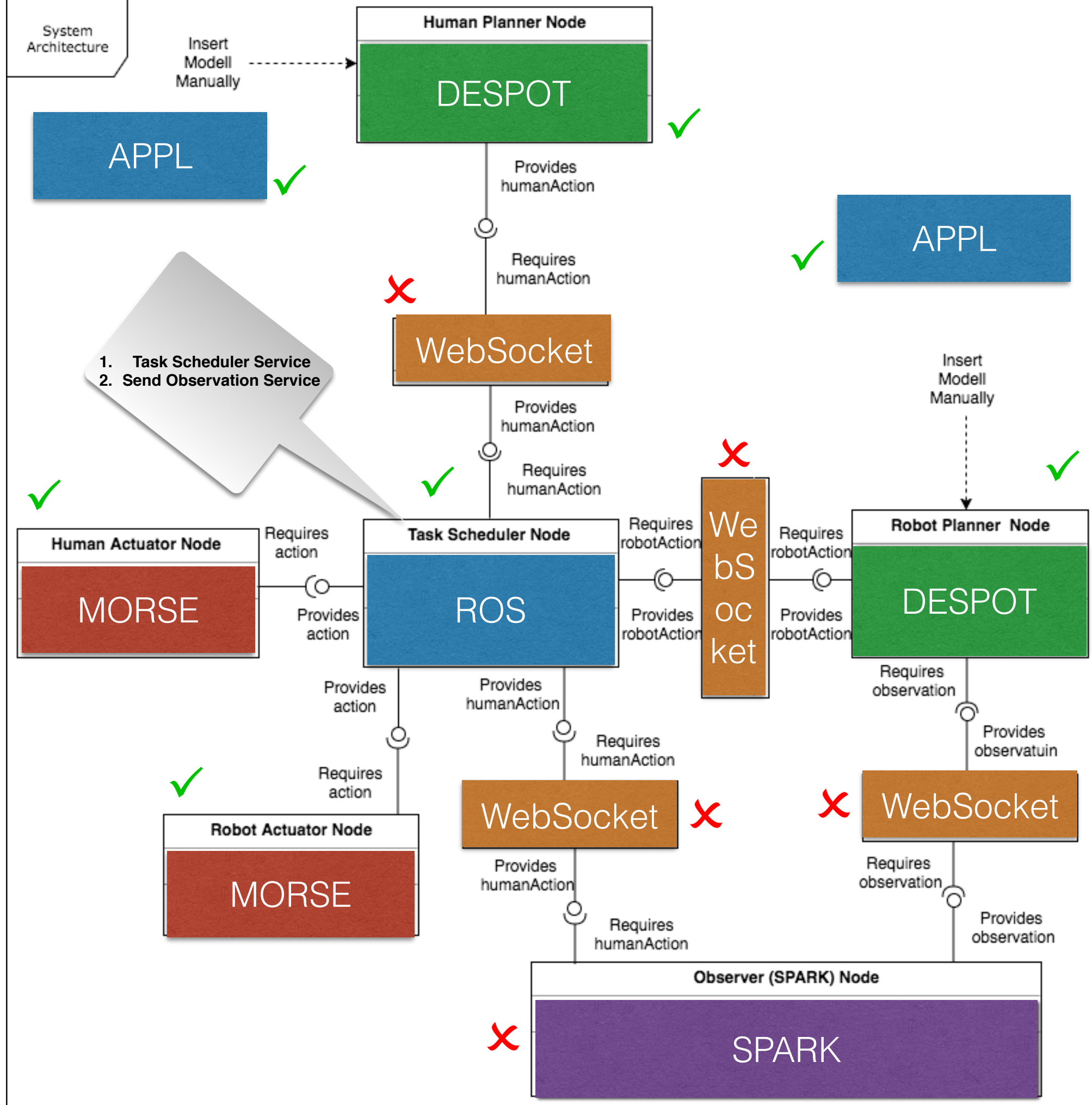
Milestone 2

Environment Setup

Perspective taking (ToM) and adaptive decision-making in HRI

Group 3





```

<Variable>

<StateVar vnamePrev="state_0" vnameCurr="state_1" fullyObs="true">
  <ValueEnum>success fail</ValueEnum>
</StateVar>

<ActionVar vname="action_agent">
  <ValueEnum>grasp nograsp</ValueEnum>
</ActionVar>

<RewardVar vname="reward_agent"/>

</Variable>

```

1

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<InitialStateBelief>
  <CondProb>
    <Var>state_0</Var>
    <Parent>null</Parent>
    <Parameter type="TBL">
      <Entry>
        <Instance> - </Instance>
        <ProbTable>uniform</ProbTable>
      </Entry>
    </Parameter>
  </CondProb>
</InitialStateBelief>

```

2

```

<RewardFunction>
<Func>
<Var>reward_agent</Var>
<Parent>action_agent state_0</Parent>
<Parameter type = "TBL">
<Entry>
<Instance>grasp success</Instance>
<ValueTable>10</ValueTable></Entry>
<Entry>
<Instance>grasp fail</Instance>
<ValueTable>10</ValueTable></Entry>
<Entry>
<Instance>nograsp success</Instance>
<ValueTable>-10</ValueTable></Entry>
<Entry>
<Instance>nograsp fail</Instance>
<ValueTable>-10</ValueTable></Entry>
</Parameter>
</Func>
</RewardFunction></pomdp>

```

4

```

<StateTransitionFunction>
<CondProb>
<Var>state_1</Var>
<Parent>action_agent state_0</Parent>
<Parameter type = "TBL">
<Entry>
<Instance>grasp success success</Instance>
<ProbTable>1.0</ProbTable>
</Entry>
<Entry>
<Instance>nograsp success fail</Instance>
<ProbTable>1.0</ProbTable>
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<Entry>
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<ProbTable>1.0</ProbTable>
</Entry>
<Entry>
<Instance>grasp fail success</Instance>
<ProbTable>1.0</ProbTable>
</Entry>
</Parameter>
</CondProb>
</StateTransitionFunction>

```

3

DEMO

