COMSATS University Islamabad

**Assignment # 4**



**Submitted by:**

**Hassan Munir (SP19-BSE-056)**

**Class:** BSE-6B

**Submitted to:** Bushra Naz

**Course:** Artificial Intelligence

DEPARTMENT OF COMPUTER SCIENCES

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# Task Analysis

* First step would be to look at the table and chair to sense their colors.
* In case they have are the same color, then there is no need to do any work.
* Otherwise, check if chair’s or table’s color is the same as any of the cans.
* If above step is true, then paint the other with the same color.
* Otherwise, both pieces should be painted with same color.

# States

## Current State

Object(Table) ^ Object(Chair) ^ Can(C1) ^ Can(C2) ^ InView(Table)

## Actions

LookAt(x):

Precond: InView(x) ^ (x != y)

Effect: InView(x) ^ ! InView(y)

Paint(x, can)

Precond: Object(x) ^ Can(C1) ^ Open(C1)

Effect: Color (x, c)

RemoveLid(can):

Precond: Can(can)

Effect: Open(can)

LookAt (Table), LookAt (Chair),

If Color (Table, c) ^ Color (Chair, c) then NoOp

Else

LookAt Can1 ^ LookAt Can2

If Color(Table, c) ^ Color(can, c) then

RemoveLid(can) Piant(Chair, can)

If Color(Chair, c) ^ Color(can, c) then

RemoveLid(can) Piant(Table, can)

Else

Paint(Table, can) ^ Paint(Chair, can)

## Goals State

Given a chair and a table, the goal is to have them match such that they have the same color

Color ( Chair,c) ^ Color( Table,c)