Multi Agent Systems: Assignment 2

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1 Question 1: Knowledge Representation for CSP

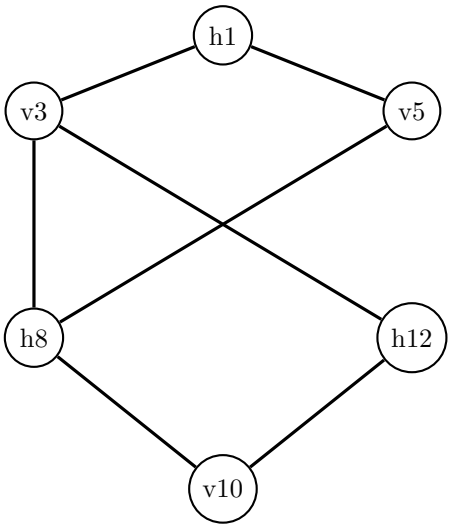
1.1

$V = \{h1, v3, v5, h8, h12\}$
$D_{h1} = \{hoses, laser, sheet, snail, steer\}$
$D_{v3} = \{also, earn, hike, iron, same\}$
$D_{v5} = \{eat, let, run, sun, ten, yes\}$
$D_{h8} = \{also, earn, hike, iron, same\}$
$D_{v10} = \{be, it, no, us, oo\}$
$D_{h12} = \{be, it, no, us, oo\}$

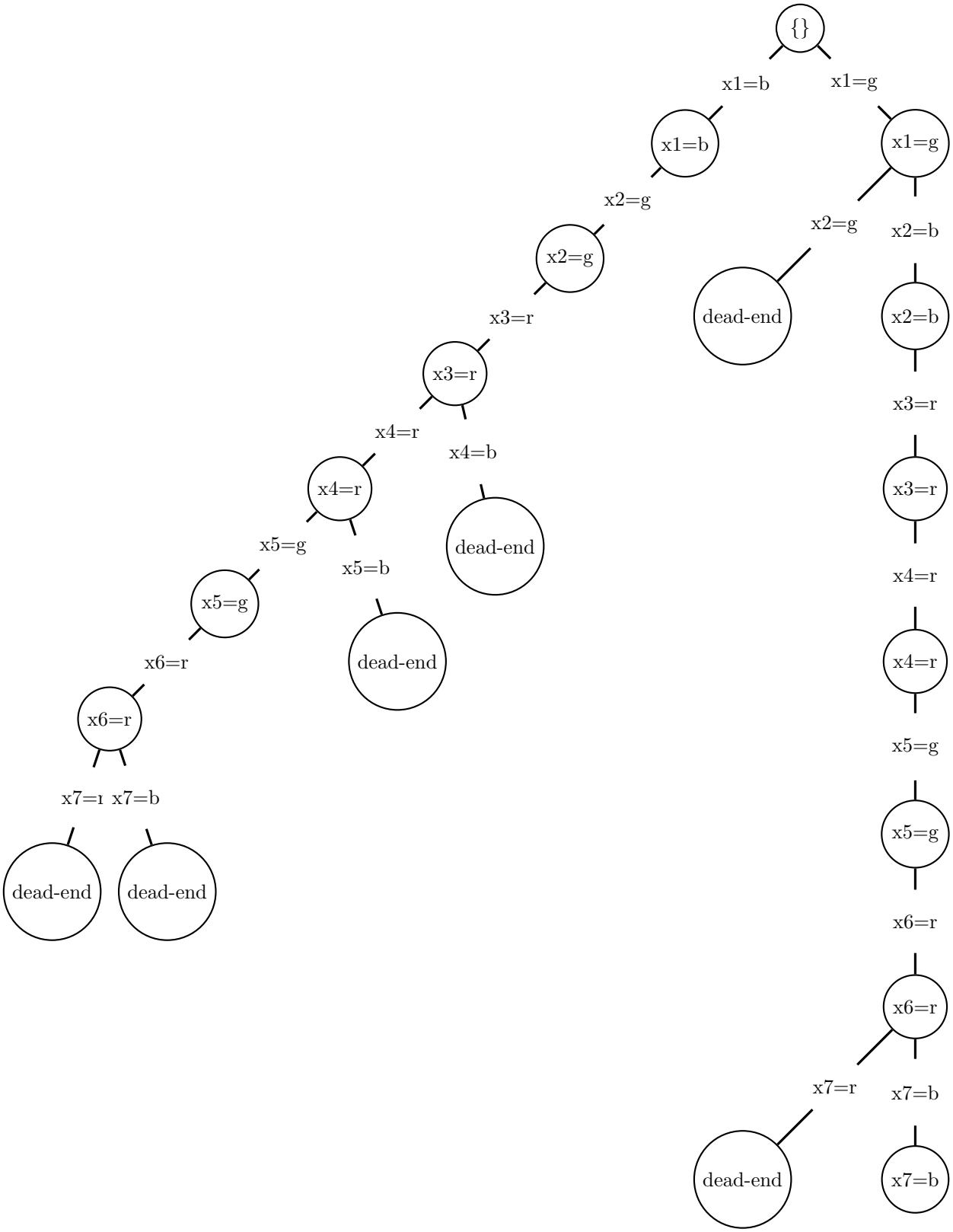
1.2

$C_{h1,v3} = \{(hoses, same), (laser, same), (snail, also), (steer, earn), (sheet, earn)\}$
$C_{h1,v5} = \{(hoses, sun), (laser, run), (sheet, ten), (snail, let), (steer, run)\}$
$C_{v3,h8} = \{(earn, iron)\}$
$C_{v3,h12} = \{(also, oo), (earn, no), (iron, no)\}$
$C_{v5,h8} = \{(run, earn), (run, iron), (sun, earn), (sun, iron)\}$
$C_{h8,v10} = \{(iron, oo)\}$
$C_{v10,h12} = \{(no, oo), (no, no), (oo, no), (oo, oo)\}$

1.3



2 Question 2: Solving CSP by Single Agent



Solution:(x1=g, x2=b, x3=r, x4=r, x5=g, x6=r, x7=b)

3 Question 3: Pseudo-Tree Organization for DCOP