**Decision Network Diagram:**

Diagram

Description automatically generated

**Expected Utility Formula:**

EU(A = a) = ΣE={WSB,WSG,BD} (wE \* ΣSB={T,F},SG={T,F} ( P(E/ A = a, SB = sb, SG = sg) \* U(E) ))

Above WE = weight,

W = 0.1 if WSB

0.4 if WSG

0.5 if BD

U(E) = if WSB = T then 1.0

If WSB = F then -1.0

If WSG = T then 1.0

If WSG = F then -1.0

If BD = Unknown then 0

If BD = Far then 0.5

If BD = Near then 1.0

U()= utility function for environment,

EU() = expected utility of action,

{SB,SG} are the evidence and

{WSB,WSG,BD} are the environment.

**Evidence Introduction:**

Note: The calculations were taken from code execution of file “Krislet/DeductiveNetwork.java”. Please read the [GitHub](https://github.com/AbdulMutakabbir/SYSC5103_Software-Agents/tree/assignment_2_q2) page for instructions on how to execute the code to get Expected Utiliy output.

**Code Execution:** Same as Krizlet.

Note:

The [GitHub](https://github.com/AbdulMutakabbir/SYSC5103_Software-Agents/tree/assignment_2_q2) link will provide additional information about the agent execution.