

1)

$$\Delta^I = \{a\}$$

$$\text{manages}^I = \{\}$$

$$\text{project}^I = \{b\}$$

$$\forall \text{ manages. Project} = \{a\}$$

2)

$$\Delta^I = \{a, b\}$$

$$\text{manages}^I = \{(a, a)\}$$

$$\text{project}^I = \{\}$$

$$\forall \text{ manages. Project} = \{b\}$$

3)

$$\Delta^I = \{a\}$$

$$\text{manages}^I = \{\}$$

$$\text{project}^I = \{a\}$$

$$\forall \text{ manages. Project} = \{a\}$$

4)

$$\Delta^I = \{a, b\}$$

$$\text{manages}^I = \{(a, b)\}$$

$$\text{project}^I = \{\}$$

$$\forall \text{ manages. Project} = \{b\}$$

5)

$$\Delta^I = \{a, b\}$$

$$\text{manages}^I = \{(a, b), (b, b)\}$$

$$\text{project}^I = \{\}$$

$$\forall \text{ manages. Project} = \{\}$$

$$\text{manges} = \{(a,b), (b,a)\}$$

$$\text{proj}^T = \{\}$$

$$6) \Delta^I = \{a, b\} \quad \forall \text{manges. Proj}^T = \{\}$$

$$\text{manges}^I = \{(a,b), (b,a)\}$$

$$\text{proj}^T = \{\}$$

$$7) \Delta^I = \{a, b\} \quad \forall \text{manges. Proj}^T = \{a, b\}$$

$$\text{manges}^I = \{(a,b), (b,b)\}$$

$$\text{proj}^T = \{b\}$$

$$8) \Delta^I = \{a, b\} \quad \forall \text{manges. Proj}^T = \{b\}$$

$$\text{manges}^I = \{(a,b)\}$$

$$\text{proj}^T = \{a\}$$