

From this it follows that any PSJ-expression can be written in the form $E = \pi_{\mathbf{A}} \sigma_{\mathcal{C}} (R_{i_1} \times R_{i_2} \times \dots \times R_{i_k})$, where $R_{i_1}, R_{i_2}, \dots, R_{i_k}$ are relation schemes, \mathcal{C} is a selection condition, and $\mathbf{A} = \{A_1, A_2, \dots, A_l\}$ are the attributes of the projection. We can therefore represent any PSJ-expression by a triple $E = (\mathbf{A}, \mathbf{R}, \mathcal{C})$, where $\mathbf{A} = \{A_1, A_2, \dots, A_l\}$ is called the *attribute set*, $\mathbf{R} = \{R_{i_1}, R_{i_2}, \dots, R_{i_k}\}$ is the *relation set* or *base*, and \mathcal{C} is a *selection condition* composed from the conditions of all the select and join operations of the relational algebra expression defining E . The attributes in \mathbf{A} will often be referred to as the *visible* attributes of the derived relation. A *selection condition* is a Boolean combination of atomic (selection) conditions. We also use the notation