

**Relation** – A relation is any subset of a Cartesian product. For instance, a subset of  $A \times B$ , called a "binary relation from  $A$  to  $B$ ," is a collection of ordered pairs  $(a, b)$  with first components from  $A$  and second components from  $B$ , and, in particular, a subset of  $A \times A$  is called a "relation on  $A$ ."