Sets and Relations

Some sets and relations bs was done.

Keywords

- Image of a function
- Codomain of a function
- range of a function
- Reflexive relation
    - > (a,a) ϵ R
- Symmetric relation
    - > if (b,a) ϵ R when (a,b) ϵ R
- Antisymmetric relation
    - > if (b,a) ϵ R when (a,b) does not belong to R
- Inverse of binary relation
    - > { (b,a) : (a,b) ϵ R }
- Partial Order Relation
    - Relation is Reflexive,Antisymmetric and Transitive
    - Example: x >= y
- Total Order Relations
    - A partial order relation is a total order relation **for all a,b whenever a,b ϵ A either (a,b) ϵ R or (b,a) ϵ R**

Languages

Languages consist of a set of symbols.

> The words in a language can be defined as a powerset of alphabet. This is incorrect, since a powerset does not contain repeated elements.

String

Finite sequence of symbols from the alphabet. 010101010000 is a string over the binary alphabet {0,1}