

## Modelos de Bases de Datos

- 1 Modelo de Archivos Planos
- 2 Modelo Jerárquico
- 3 Modelo de Redes
- 4 Introducción al Modelo Relacional

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## Modelos de Bases de Datos

- 3 Modelo de Redes

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## Modelo de Redes

Nace para corregir deficiencias del  
Modelo Jerárquico

Permitir Relaciones  
N : M

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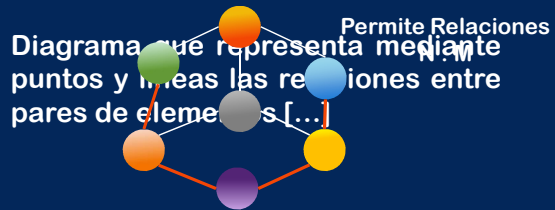
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## Modelo de Redes

### Grafo

Del griego *Grafos*: "Dibujo".




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## Modelo de Redes




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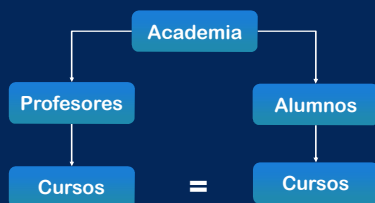
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## Modelo de Redes




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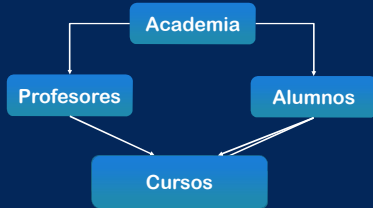
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### Modelo de Redes




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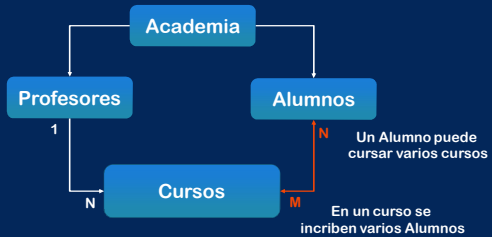
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### Modelo de Redes




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### Modelo de Redes

#### Objetivo

- Ser más flexible que el modelo Jerárquico
- Permitir manejar relaciones más complejas

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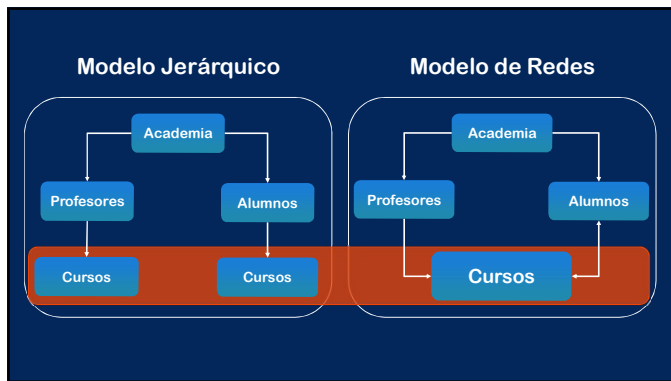
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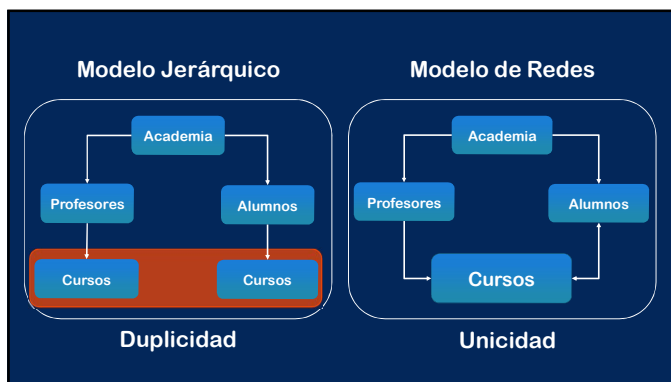
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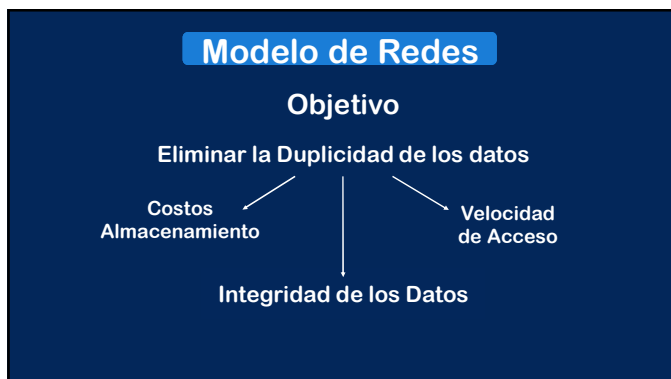
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### Integridad de los Datos

Mantener y asegurar la  
Exactitud y Consistencia  
durante toda la vida de los datos

Reglas de Integridad

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### Modelo de Redes

Definición

Conference on Data System Languages (CODASYL)

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Base de Datos

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### Modelo de Redes

Muy compleja  
lista de Apuntadores  
Extremadamente difícil  
de mantener

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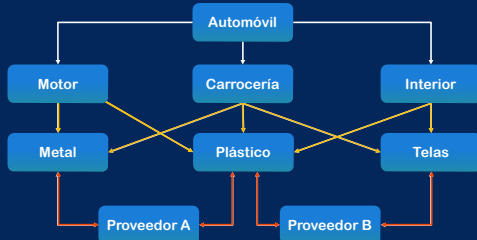
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### Modelo de Redes



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## Modelo de Redes



- Estructura de Grafos
- Permite relaciones N : M
- Conceptualmente Simple
- Estructuralmente Complicado
- Manejo de Apuntadores




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## Modelo de Redes

### Auge y Caída

- Presentación (1969-1971)
- Modelo Jerárquico bien establecido
- Junio 1970 - Artículo de Edgar F. Codd  
*"Un Modelo Relacional para Grandes Bancos de Datos Compartidos"*
- Especificación ISO (1980)

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