

Tarea 16:

staffNo	branchNo	branchAddress	name	position	hours per Week
S4555	B002	City Center Plaza, Seattle, WA	Ellen Layman	Assistant	16
S4555	B004	16-14th Avenue, Seattle, WA	Ellen Layman	Assistant	9
S4612	B002	City Center Plaza, Seattle, WA	Dave Sinclair	Assistant	14
S4612	B004	16-14th Avenue, Seattle, WA	Dave Sinclair	Assistant	10

X

Y

Z

W

A

B

→ Encontrar todas las dependencias.

$$X \rightarrow W$$

$$\{X, Y\} \rightarrow B$$

$$X \rightarrow \{W, A\}$$

$$Y \rightarrow Z$$

$$B \rightarrow \{X, Y, Z, W, A\}$$

$$Y \rightarrow \{Z, A\}$$

$$\{B, A, W\} \rightarrow \{X, Y, Z\}$$

$$\{X, W\} \rightarrow A$$

$$\{B, A, W, Z\} \rightarrow \{X, Y\}$$

$$B \rightarrow \{X, Y, Z\}$$

$$B \rightarrow X$$

$$B \rightarrow A$$

$$\{B, A, W, Z, Y\} \rightarrow X$$

$$B \rightarrow \{X, Y\}$$

$$B \rightarrow Y$$

$$B \rightarrow \{X, Y, Z, W\}$$

$$B \rightarrow Z$$

$$B \rightarrow W$$

→ Posibles CK y PK

Dependencia	SK	CK	PK
$X \rightarrow W$	X	X	X
$Y \rightarrow Z$	X	X	X
$\{X, Y\} \rightarrow B$	O	O	O
$X \rightarrow \{W, A\}$	X	X	X
$Y \rightarrow \{Z, A\}$	X	X	X
$B \rightarrow \{X, Y, Z, W, A\}$	O	O	O

→ Por lógica del contexto, la dependencia $B \rightarrow \{X, Y, Z, W, A\}$ no puede ser PK.

→ Cerradura

$$XYZwAB^+ \rightarrow \{X, Y, Z, w, A, B\}$$

$$XYZB^+ \rightarrow \{X, Y, Z, w, A, B\}$$

$$XYB^+ \rightarrow \{X, Y, Z, w, A, B\}$$

$$XY^+ \rightarrow \{X, Y, Z, w, A, B\}$$

$$AP: [X, Y]$$

$$CK: [XY]$$

¿Es CK?

$$\begin{cases} X^+ \rightarrow \{X, w, A\} X \\ Y^+ \rightarrow \{Y, Z, A\} X \end{cases}$$

$$\therefore PK: [XY]$$

→ Normalización

$$X \rightarrow \{w, A\}$$

$$Y \rightarrow Z$$

<u>staffNo</u>	name	position	<u>branchNo</u>	branchAddress
54555	Ellen Layman	Assistant	B002	City Center Plaza, Seattle
54612	Dave Sinclair	Assistant	B004	16-19th Avenue, Seattle

$$\{X, Y\} \rightarrow B$$

Relación m:m

<u>staffNo</u>	<u>branchNo</u>	hours
54555	B002	16
54555	B004	9
54612	B002	14
54612	B004	10