Imagen que contiene Interfaz de usuario gráfica

Descripción generada automáticamente

EJERCICIOS DE NORMALIZACIÓN DE BASES DE DATOS

**1.- Normalizar hasta la 3FN indicando las dependencias funcionales**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cod\_vendedor | Fecha | Cod\_articulo | Denominación | Existencia | Precio\_articulo | Precio\_venta |
| 5100 | 18/11/05 | 5100 | Papas | 500 | 3.2 | 100 |
| 5100 | 18/11/05 | 5200 | Cebollas | 250 | 4.1 | 100 |
| 5200 | 19/11/05 | 5100 | Papas | 500 | 3.2 | 120 |
| 5200 | 19/11/05 | 5200 | Cebollas | 250 | 4.1 | 120 |
| 5100 | 19/11/05 | 5100 | Papas | 500 | 3.2 | 45 |
| 5100 | 19/11//05 | 5200 | Cebollas | 250 | 4.1 | 45 |

Ya cumple la primera forma normal.

2FN

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cod\_articulo** | **Denominación** | **Existencia** | **Precio\_venta** | **Precio\_Artículo** |
| 5100 | Papas | 500 | 100 | 3.2 |
| 5200 | Cebollas | 250 | 100 | 4.1 |
| 5100 | Papas | 500 | 120 | 3.2 |
| 5200 | Cebollas | 250 | 120 | 4.1 |
| 5100 | Papas | 500 | 45 | 3.2 |
| 5200 | Cebollas | 250 | 45 | 4.1 |

|  |  |  |
| --- | --- | --- |
| **Cod\_vendedor** | **Fecha** | **Cod\_articulo(FK)** |
| 5100 | 18/11/05 | 5100 |
| 5100 | 18/11/05 | 5200 |
| 5200 | 19/11/05 | 5100 |
| 5200 | 19/11/05 | 5200 |
| 5100 | 19/11/05 | 5100 |
| 5100 | 19/11//05 | 5200 |

3 FN

|  |  |
| --- | --- |
| **Cod\_vendedor** | **Cod\_articulo (FK)** |
| 5100 | 5100 |
| 5100 | 5200 |
| 5200 | 5100 |
| 5200 | 5200 |
| 5100 | 5100 |
| 5100 | 5200 |

|  |  |  |
| --- | --- | --- |
| **Cod\_vendedor** | **Fecha** | **Cod\_articulo(FK)** |
| 5100 | 18/11/05 | 5100 |
| 5100 | 18/11/05 | 5200 |
| 5200 | 19/11/05 | 5100 |
| 5200 | 19/11/05 | 5200 |
| 5100 | 19/11/05 | 5100 |
| 5100 | 19/11//05 | 5200 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cod\_articulo** | **Denominación** | **Existencia** | **Precio\_venta** | **Precio\_Artículo** |
| 5100 | Papas | 500 | 100 | 3.2 |
| 5200 | Cebollas | 250 | 100 | 4.1 |
| 5100 | Papas | 500 | 120 | 3.2 |
| 5200 | Cebollas | 250 | 120 | 4.1 |
| 5100 | Papas | 500 | 45 | 3.2 |
| 5200 | Cebollas | 250 | 45 | 4.1 |

**2. - Normalizar hasta la 3FN indicando las dependencias funcionales**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| COD\_EMPLEADO | NOMBRE | COD\_DEPARTAMENTO | NOMBRE\_DEPARTAMENTO | AÑOS\_DEPARTAMENTO |
| 1 | Juan | 6 | Contabilidad | 6 |
| 2 | Pedro | 3 | Sistemas | 3 |
| 2 | Pedro | 6 | Contabilidad | 5 |
| 3 | Sonia | 2 | I+D | 1 |
| 4 | Verónica | 3 | Sistemas | 10 |
| 4 | Verónica | 6 | Contabilidad | 2 |

Ya está en primera forma.

2FN

|  |  |
| --- | --- |
| **COD\_EMPLEADO** | **NOMBRE** |
| 1 | Juan |
| 2 | Pedro |
| 2 | Pedro |
| 3 | Sonia |
| 4 | Verónica |
| 4 | Verónica |

|  |  |
| --- | --- |
| **COD\_DEPARTAMENTO** | **NOMBRE\_DEPARTAMENTO** |
| 6 | Contabilidad |
| 3 | Sistemas |
| 6 | Contabilidad |
| 2 | I+D |
| 3 | Sistemas |
| 6 | Contabilidad |

|  |  |  |
| --- | --- | --- |
| **COD\_EMPLEADO (FK)** | **COD\_DEPARTAMENTO (FK)** | **AÑOS\_DEPARTAMENTO** |
| 1 | 6 | 6 |
| 2 | 3 | 3 |
| 2 | 6 | 5 |
| 3 | 2 | 1 |
| 4 | 3 | 10 |
| 4 | 6 | 2 |

3FN

|  |  |
| --- | --- |
| **COD\_EMPLEADO** | **NOMBRE** |
| 1 | Juan |
| 2 | Pedro |
| 2 | Pedro |
| 3 | Sonia |
| 4 | Verónica |
| 4 | Verónica |

|  |  |
| --- | --- |
| **COD\_DEPARTAMENTO** | **NOMBRE\_DEPARTAMENTO** |
| 6 | Contabilidad |
| 3 | Sistemas |
| 6 | Contabilidad |
| 2 | I+D |
| 3 | Sistemas |
| 6 | Contabilidad |

|  |  |  |
| --- | --- | --- |
| **COD\_EMPLEADO** | **COD\_DEPARTAMENTO (FK)** | **AÑOS\_DEPARTAMENTO** |
| 1 | 6 | 6 |
| 2 | 3 | 3 |
| 2 | 6 | 5 |
| 3 | 2 | 1 |
| 4 | 3 | 10 |
| 4 | 6 | 2 |

**3.** **Normalizar hasta la 3FN indicando las dependencias funcionales**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cod\_cliente** | **Nombre** | **Apellidos** | **Cod\_video** | **Título** | **Género** | **Productora** | **País** |
| 0001 | Juan | López | A001 | Sisí emperatriz | Romántica | Paramount | EEUU |
| 0001 | Juan | López | B0002 | Aladín | Infantil | Cinesa | España |
| 0002 | María | Álvarez | B0003 | La sirenita | Infantil | Fox | España |
| 0002 | María | Álvarez | B0004 | Dumbo | Infantil | Universal estudio | EEUU |

Ya está en 1FN

2FN

|  |  |  |
| --- | --- | --- |
| **Cod\_cliente** | **Nombre** | **Apellidos** |
| 0001 | Juan | López |
| 0001 | Juan | López |
| 0002 | María | Álvarez |
| 0002 | María | Álvarez |

|  |  |  |  |
| --- | --- | --- | --- |
| **Cod\_video** | **Título** | **Productora** | **País** |
| A001 | Sisí emperatriz | Paramount | EEUU |
| B0002 | Aladín | Cinesa | España |
| B0003 | La sirenita | Fox | España |
| B0004 | Dumbo | Universal estudio | EEUU |

|  |  |  |
| --- | --- | --- |
| **Cod\_cliente** | **Cod\_video (FK)** | **Fecha** |
| 0001 | A001 |  |
| 0001 | B0002 |  |
| 0002 | B0003 |  |
| 0002 | B0004 |  |

3FN

|  |  |  |
| --- | --- | --- |
| **Cod\_cliente** | **Nombre** | **Apellidos** |
| 0001 | Juan | López |
| 0001 | Juan | López |
| 0002 | María | Álvarez |
| 0002 | María | Álvarez |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cod\_video** | **Título** | **Cod\_genero (FK)** | **Cod\_Productora (FK)** | **Cod\_pais (FK)** |
| A001 | Sisí emperatriz | 1111 | 1111 | 1111 |
| B0002 | Aladín | 2222 | 2222 | 2222 |
| B0003 | La sirenita | 3333 | 3333 | 3333 |
| B0004 | Dumbo | 4444 | 4444 | 4444 |

|  |  |
| --- | --- |
| **Cod\_Genero** | **Género** |
| 1111 | Romántica |
| 2222 | Infantil |
| 3333 | Infantil |
| 4444 | Infantil |

|  |  |
| --- | --- |
| **Cod\_productora** | **Productora** |
| 1111 | Paramount |
| 2222 | Cinesa |
| 3333 | Fox |
| 4444 | Universal estudio |

|  |  |
| --- | --- |
| **Cod\_pais** | **País** |
| 1111 | EEUU |
| 2222 | España |
| 3333 | España |
| 4444 | EEUU |

|  |  |  |
| --- | --- | --- |
| **Cod\_cliente** | **Cod\_video (FK)** | **Fecha** |
| 0001 | A001 |  |
| 0001 | B0002 |  |
| 0002 | B0003 |  |
| 0002 | B0004 |  |

**4. Normaliza la siguiente tabla hasta la tercera forma normal.**

Interfaz de usuario gráfica, Tabla

Descripción generada automáticamente

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nº factura | Fecha | Cliente | Nº cliente | Dirección | Pos. Ítem | Artículo | Nº artículo | Uds. | Precio |
| 123 | 29.01.2018 | José García | 11 | PI, Principal 1, 12345 Villarriba | 1 | Monitor | 2-0023-D | 10 | 200 euros |
| 123 | 29.01.2018 | José García | 11 | PI, Principa l1, 12345 Villarriba | 2 | Ratón | 4-0023-D | 12 | 50 céntimos |
| 123 | 29.01.2018 | José García | 11 | PI, Principa l1, 12345 Villarriba | 3 | Silla oficina | 5-0023-D | 1 | 120 euros |
| 124 | 30.01.2018 | María Pérez | 12 | PI, Principal 2, 12345 Villarriba | 1 | Portátil | 1-0023-D | 2 | 1200 euros |
| 124 | 30.01.2018 | María Pérez | 12 | PI, Principal 2, 12345 Villarriba | 2 | Auriculares | 3-0023-D | 2 | 75 euros |

1FN

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nº factura** | **Fecha** | **Nombre** | **Apellido** | **Nº cliente** | **Calle** | **Municipio** | **CP** | **Nº** | **Pos. ítem** | **Artículo** | **Nº Artículo** | **Uds.** | **Cant\_precio** |
| 123 | 29.01.2018 | José | García | 11 | PI, Principa | Villarriba | 12345 | 1 | 1 | Monitor | 2-0023-D | 10 | 200 |
| 123 | 29.01.2018 | José | García | 11 | PI, Principa | Villarriba | 12345 | 1 | 2 | Ratón | 4-0023-D | 12 | 0.50 |
| 123 | 29.01.2018 | José | García | 11 | PI, Principa | Villarriba | 12345 | 1 | 3 | Silla oficina | 5-0023-D | 1 | 120 |
| 124 | 30.01.2018 | María | Pérez | 12 | PI, Principa | Villarriba | 12345 | 2 | 1 | Portátil | 1-0023-D | 2 | 1200 |
| 124 | 30.01.2018 | María | María | 12 | PI, Principa | Villarriba | 12345 | 2 | 2 | Auriculares | 3-0023-D | 2 | 75 |

2FN

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nº factura** | **Fecha** | **Nº cliente (FK)** | **Nombre** | **Apellido** | **Calle** | **Municipio** | **CP** | **Nº** |
| 123 | 29.01.2018 | 11 | José | García | PI, Principa | Villarriba | 12345 | 1 |
| 123 | 29.01.2018 | 11 | José | García | PI, Principa | Villarriba | 12345 | 1 |
| 123 | 29.01.2018 | 11 | José | García | PI, Principa | Villarriba | 12345 | 1 |
| 124 | 30.01.2018 | 12 | María | Pérez | PI, Principa | Villarriba | 12345 | 2 |
| 124 | 30.01.2018 | 12 | María | María | PI, Principa | Villarriba | 12345 | 2 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Nº Artículo** | **Uds.** | **Pos. ítem** | **Cant\_precio** | **Artículo** | **Nº factura(FK)** |
| 2-0023-D | 10 | 1 | 200 | Monitor | 123 |
| 4-0023-D | 12 | 2 | 0.50 | Ratón | 123 |
| 5-0023-D | 1 | 3 | 120 | Silla oficina | 123 |
| 1-0023-D | 2 | 1 | 1200 | Portátil | 124 |
| 3-0023-D | 2 | 2 | 75 | Auriculares | 124 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Nº factura** | **Fecha** | **Nº cliente (FK)** | **Nº Artículo (FK)** |
| 123 | 29.01.2018 | 11 | 2-0023-D |
| 123 | 29.01.2018 | 11 | 4-0023-D |
| 123 | 29.01.2018 | 11 | 5-0023-D |
| 124 | 30.01.2018 | 12 | 1-0023-D |
| 124 | 30.01.2018 | 12 | 3-0023-D |

3FN

|  |  |  |  |
| --- | --- | --- | --- |
| **Nº Artículo** | **Uds.** | **Pos. ítem** | **Cant\_precio** |
| 2-0023-D | 10 | 1 | 200 |
| 4-0023-D | 12 | 2 | 0.50 |
| 5-0023-D | 1 | 3 | 120 |
| 1-0023-D | 2 | 1 | 1200 |
| 3-0023-D | 2 | 2 | 75 |

|  |  |
| --- | --- |
| **Nº factura** | **Fecha** |
| 123 | 29.01.2018 |
| 123 | 29.01.2018 |
| 123 | 29.01.2018 |
| 124 | 30.01.2018 |
| 124 | 30.01.2018 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Nombre** | **Apellido** | **Nº cliente** | **Calle** | **Municipio** | **CP** | **Nº** |
| José | García | 11 | PI, Principa | Villarriba | 12345 | 1 |
| José | García | 11 | PI, Principa | Villarriba | 12345 | 1 |
| José | García | 11 | PI, Principa | Villarriba | 12345 | 1 |
| María | Pérez | 12 | PI, Principa | Villarriba | 12345 | 2 |
| María | María | 12 | PI, Principa | Villarriba | 12345 | 2 |