Universidad Católica Andrés Bello  
Escuela De Ingeniería Informática  
Sistemas de Bases de Datos 1  
Sección 02  
Grupo #2

**Los Perfumes: Entrega #1**

**Integrantes:**

Ricardo Salvatorelli (C.I.: 26.967.602)  
José Manuel Ramírez (C.I.: 26.902.002)  
David Zacarias (C.I.: 27.588.099)

Caracas, junio del 2020.

**Tabla de Contenidos**

**Modelo Relacional3**

Modelo Relacional3

Leyenda de Constraints12

**Lista de Procesos de Negocio13**

**Diagrama de Actividades15**

Registro de proveedores15

CRUD de los métodos de envío16

CRUD de los métodos de pago17

Gestión de catálogo de proveedor18

Administración de evaluación a proveedores19

Gestión de fórmulas de evaluación20

CRUD fórmula inicial21

CRUD fórmula anual22

Gestión de evaluación a proveedores23

Gestión de contratos24

Compras a proveedores25

Administración de pedidos26

Gestión de facturas y pagos27

Recomendador de perfumes28

Flujos adicionales29

Lista de facturas de proveedor30

Administración de pedidos de proveedor31

Lista de contratos proveedor32

Menú productor33

**Modelo Relacional**

**PRESENTACIONES**

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id | unidad\_medida | cantidad\_medida |
| PK | PK |  |  |
| NN | NN | NN | NN |
| FK |  |  |  |
| Check |  | check(‘gr’,’kg’,’ml’,’lt’) |  |
| Unique |  |  |  |
| Type | number | char | number |

**FAMILIAS\_OLFATIVAS PERSONALIDADES**

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

**CARACTERES REGIONES**

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id | nombre | nacionalidad | id\_region |
| PK | PK |  |  |  |
| NN | NN | NN | NN | NN |
| FK |  |  |  | FK |
| Check |  |  |  |  |
| Unique |  | U | U |  |
| Type | number | varchar | varchar | Number |

**PAISES**

**CIUDADES ASOCIACIONES**

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id | nombre | id\_pais |
| PK | PK |  |  |
| NN | NN | NN | NN |
| FK |  |  | FK |
| Check |  |  |  |
| Unique |  |  |  |
| Type | number | varchar | Number |

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id | nombre | id\_pais |
| PK | PK |  |  |
| NN | NN | NN | NN |
| FK |  |  | FK |
| Check |  |  |  |
| Unique |  |  |  |
| Type | number | varchar | Number |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | id | nombre | fec\_inic | fec\_fin | tipo | cod\_postal | calle | numero | id\_ciudad | id\_asoc |
| PK | PK |  |  |  |  |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN | NN | NN | NN | NN |  |
| FK |  |  |  |  |  |  |  |  | FK1 | FK2 |
| Check |  |  |  |  | check(‘p’,’s’,’a’) |  |  |  |  |  |
| Unique |  |  |  |  |  |  |  |  |  |  |
| Type | number | varchar | date | date | char | number | varchar | number | number | number |

**PROVEEDORES**

**PRODUCTORES**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | id | nombre | fec\_inic | fec\_fin | tipo | cod\_postal | calle | numero | id\_ciudad | id\_asoc |
| PK | PK |  |  |  |  |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN | NN | NN | NN | NN |  |
| FK |  |  |  |  |  |  |  |  | FK1 | FK2 |
| Check |  |  |  |  | check(‘p’,’s’,’a’) |  |  |  |  |  |
| Unique |  |  |  |  |  |  |  |  |  |  |
| Type | number | varchar | date | date | char | number | varchar | number | number | number |

**PERFUMISTAS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| atributo | id | primer\_n | primer\_a | segundo\_a | id\_país | segundo\_n |
| PK | PK |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN |  |
| FK |  |  |  |  | FK |  |
| Check |  |  |  |  |  |  |
| Unique |  |  |  |  |  |  |
| Type | number | varchar | varchar | varchar | number | varchar |

**INFORMACION\_CONTACTOS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | id | correo | telefono | id\_asoc | id\_prov | id\_prod | url\_web |
| PK | PK |  |  |  |  |  |  |
| NN | NN | NN | NN |  |  |  |  |
| FK |  |  |  | FK1 | FK2 | FK3 |  |
| Check |  |  |  |  |  |  |  |
| Unique |  | U | U | U | U | U | U |
| Type | number | varchar | varchar | number | number | number | varchar |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | id | nombre | tipo\_conc | descripcion | genero | id\_productor | rango\_edad |
| PK | PK |  |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN | NN | NN |
| FK |  |  |  |  |  | FK |  |
| Check |  |  | check(‘P’,’EdP’,’EdT’,’EdC’,’EdS’) |  | check(‘M’,’F’,’U’) |  | check(‘at,’jo’,’ad’,’an’) |
| Unique |  |  |  |  |  |  |  |
| Type | number | varchar | char | varchar | char | number | char |

**PERFUMES**

|  |  |  |
| --- | --- | --- |
| atributo | num\_cas | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  |  |
| Type | number | varchar |

**AROMAS SUSTANCIAS\_PROHIBIDAS**

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id | nombre | id\_familia |
| PK | PK |  |  |
| NN | NN | NN | NN |
| FK |  |  | FK |
| Check |  |  |  |
| Unique |  | U |  |
| Type | number | varchar | number |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | num\_cas | tipo | nom\_qui | pto\_infl | naturaleza | solubilidad | vida\_util | einecs | rendim | proceso | parte\_proc | id\_pais |
| PK | PK |  |  |  |  |  |  |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN |  |  |  |  |  |  |  |
| FK |  |  |  |  |  |  |  |  |  |  |  | FK |
| Check |  | check(‘e’,’c’) |  |  | check(‘n’,’s’) |  |  |  |  |  |  |  |
| Unique |  |  |  |  |  |  |  | U |  |  |  |  |
| Type | number | char | varchar | number | char | number | number | number | varchar | varchar | varchar | number |

**INGREDIENTES**

**CATALOGO\_INGREDIENTES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| atributo | cas\_ingrediente | id\_presentacion | id\_proveedor | precio\_unit | nombre\_venta |
| PK | PK1 | PK1 | PK1 |  |  |
| NN | NN | NN | NN | NN | NN |
| FK | FK1 | FK2 | FK3 |  |  |
| Check |  |  |  |  |  |
| Unique |  |  |  |  |  |
| Type | number | number | number | number | varchar |

**DETALLES\_PERFUMES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| atributo | id | cas\_ingrediente | id\_perfume | Id\_aroma | tipo\_aroma |
| PK | PK1 | PK1 | PK1 |  |  |
| NN | NN | NN | NN |  |  |
| FK |  | FK1 | FK2 | FK3 |  |
| Check |  |  |  |  | check(‘s’,’c’,’f’) |
| Unique |  |  |  |  |  |
| Type | number | number | number | number | char |

**AROMAS\_INGREDIENTES INGREDIENTES\_INGREDIENTES**

|  |  |  |
| --- | --- | --- |
| atributo | id\_aroma | cas\_ingrediente |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

|  |  |  |
| --- | --- | --- |
| atributo | cas\_componente | cas\_esencia |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

**PERFUMES\_FAMILIAS FAMILIAS\_PERSONALIDAS**

|  |  |  |
| --- | --- | --- |
| atributo | id\_perfume | Id\_familia |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

|  |  |  |
| --- | --- | --- |
| atributo | id\_familia | id\_personalidad |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

**FAMILIAS\_CARACTERES FAMILIAS\_PRESENTACIONES**

|  |  |  |
| --- | --- | --- |
| atributo | id\_familia | id\_caracter |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

|  |  |  |
| --- | --- | --- |
| atributo | id\_familia | id\_presentacion |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

**PERFUMES\_PERFUMISTAS METODOS\_DE\_PAGO**

|  |  |  |
| --- | --- | --- |
| atributo | id\_perfume | id\_perfumista |
| PK | PK1 | PK1 |
| NN | NN | NN |
| FK | FK1 | FK2 |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

|  |  |  |
| --- | --- | --- |
| atributo | id | id\_proveedor |
| PK | PK |  |
| NN | NN | NN |
| FK |  | FK |
| Check |  |  |
| Unique |  |  |
| Type | number | number |

**CUOTAS**

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | dia\_pago | id\_met\_pago | porcentaje |
| PK | PK1 | PK1 |  |
| NN | NN | NN | NN |
| FK |  | FK |  |
| Check |  |  |  |
| Unique |  |  |  |
| Type | number | number | number |

**METODOS\_DE\_ENVIO**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| atributo | id | id\_proveedor | id\_region | tipo\_envio | duración\_base | precio\_base |
| PK | PK |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN | NN |
| FK |  | FK1 | FK2 |  |  |  |
| Check |  |  |  | check(‘a’,’m’,’t’) |  |  |
| Unique |  |  |  |  |  |  |
| Type | number | number | number | char | number | number |

**DETALLES\_METODOS\_ENVIO**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id\_met\_envio | id\_modificador | mod\_precio | mod\_duracion |
| PK | PK1 | PK1 |  |  |
| NN | NN | NN | NN | NN |
| FK | FK1 | FK2 |  |  |
| Check |  |  |  |  |
| Unique |  |  |  |  |
| Type | number | number | number | number |

**MODIFICADORES\_ENVIO CRITERIOS**

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

|  |  |  |
| --- | --- | --- |
| atributo | id | nombre |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  | U |
| Type | number | varchar |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id | escala | tipo | criterio\_acept |
| PK | PK |  |  |  |
| NN | NN | NN | NN | NN |
| FK |  |  |  |  |
| Check |  |  | check(‘i’,’a’) |  |
| Unique |  |  |  |  |
| Type | number | number | char | number |

**FORMULAS**

**VALORACIONES CASOS\_VALORACIONES**

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id\_criterio | id\_formula | peso |
| PK | PK1 | PK1 |  |
| NN | NN | NN | NN |
| FK | FK1 | FK2 |  |
| Check |  |  |  |
| Unique |  |  |  |
| Type | number | number | number |

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | id | nombre | id\_criterio |
| PK | PK |  |  |
| NN | NN | NN | NN |
| FK |  |  | FK |
| Check |  |  |  |
| Unique |  | U |  |
| Type | number | varchar | number |

**PUNTAJES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id\_caso | id\_criterio | id\_formula | puntos |
| PK | PK1 | PK1 | PK1 |  |
| NN | NN | NN | NN | NN |
| FK | FK1 | FK2 | FK2 |  |
| Check |  |  |  |  |
| Unique |  |  |  |  |
| Type | number | number | number | number |

**HISTORICO\_FORMULAS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | fecha\_inicio | id\_formula | id\_productor | fecha\_fin |
| PK | PK1 | PK1 | PK1 |  |
| NN | NN | NN | NN |  |
| FK |  | FK1 | FK2 |  |
| Check |  |  |  |  |
| Unique |  |  |  |  |
| Type | date | number | number | date |

**EVALUACIONES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| atributo | id | fecha\_ejec | tipo | id\_formula | id\_productor |
| PK | PK |  |  |  |  |
| NN | NN | NN | NN | NN | NN |
| FK |  |  |  | FK1 | FK2 |
| Check |  |  | check(‘i’,’a’) |  |  |
| Unique |  |  |  |  |  |
| Type | number | date | char | number | number |

**DETALLES\_EVALUACIONES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id\_eval | id\_proveedor | estatus | puntaje\_total |
| PK | PK1 | PK1 |  |  |
| NN | NN | NN | NN | NN |
| FK | FK1 | FK2 |  |  |
| Check |  |  | check(‘a’,’r’) |  |
| Unique |  |  |  |  |
| Type | number | number | char | number |

**PUNTOS\_CRITERIO**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | id\_eval | id\_proveedor | id\_criterio | puntos |
| PK | PK1 | PK1 | PK1 |  |
| NN | NN | NN | NN | NN |
| FK | FK1 | FK1 | FK2 |  |
| Check |  |  |  |  |
| Unique |  |  |  |  |
| Type | number | number | number | number |

**CONTRATOS METODOS\_CONTRATOS**

|  |  |  |
| --- | --- | --- |
| atributo | numero | exclusividad |
| PK | PK |  |
| NN | NN | NN |
| FK |  |  |
| Check |  |  |
| Unique |  |  |
| Type | number | boolean |

|  |  |  |  |
| --- | --- | --- | --- |
| atributo | num\_contrato | id\_met\_pago | id\_met\_envio |
| PK | PK1 | PK1 | PK1 |
| NN | NN | NN | NN |
| FK | FK1 | FK2 | FK3 |
| Check |  |  |  |
| Unique |  |  |  |
| Type | number | number | number |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| atributo | num\_contrato | cas\_ingrediente | id\_presentacion | id\_proveedor | precio\_contrato |
| PK | PK1 | PK1 | PK1 | PK1 |  |
| NN | NN | NN | NN | NN | NN |
| FK | FK1 | FK2 | FK2 | FK2 |  |
| Check |  |  |  |  |  |
| Unique |  |  |  |  |  |
| Type | number | number | number | number | number |

**DETALLES\_CONTRATO**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | num\_contrato | id\_proveedor | id\_productor | id\_evaluacion | fecha\_apertura | fecha\_cierre | razon\_cierre |
| PK | PK1 | PK1 | PK1 | PK1 |  |  |  |
| NN | NN | NN | NN | NN |  |  |  |
| FK | FK1 | FK2 | FK3 | FK4 |  |  |  |
| Check |  |  |  |  |  |  |  |
| Unique |  |  |  |  |  |  |  |
| Type | number | number | number | number | date | date | varchar |

**HISTORICO\_CONTRATOS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| atributo | id | mod\_precio | dia\_inicial | dia\_final | num\_contrato |
| PK | PK |  |  |  |  |
| NN | NN | NN | NN | NN | NN |
| FK |  |  |  |  | FK |
| Check |  |  |  |  |  |
| Unique |  |  |  |  |  |
| Type | number | number | number | number | number |

**MOD\_CONTRATOS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| atributo | numero | fec\_pedido | estatus | num\_contrato | id\_met\_pago | id\_met\_envio | fec\_envio |
| PK | PK |  |  |  |  |  |  |
| NN | NN | NN | NN | NN | NN | NN |  |
| FK |  |  |  | FK1 | FK1 | FK1 |  |
| Check |  |  | check(‘p’,’e’,’cprov’,’cprod’) |  |  |  |  |
| Unique |  |  |  |  |  |  |  |
| Type | number | date | char | number | number | number | date |

**PEDIDOS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| atributo | num\_contrato | cas\_ingrediente | id\_presentacion | id\_proveedor | num\_pedido | cantidad |
| PK | PK1 | PK1 | PK1 | PK1 | PK1 |  |
| NN | NN | NN | NN | NN | NN | NN |
| FK | FK1 | FK1 | FK1 | FK1 | FK2 |  |
| Check |  |  |  |  |  |  |
| Unique |  |  |  |  |  |  |
| Type | number | number | number | number | number | number |

**DETALLES\_PEDIDOS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | numero | fecha\_emision | monto\_total | num\_pedido |
| PK | PK |  |  |  |
| NN | NN | NN | NN | NN |
| FK |  |  |  | FK |
| Check |  |  |  |  |
| Unique |  |  |  | U |
| Type | number | date | number | number |

**FACTURAS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| atributo | numero | fecha\_pago | monto\_pagado | num\_factura |
| PK | PK |  |  |  |
| NN | NN | NN | NN | NN |
| FK |  |  |  | FK |
| Check |  |  |  |  |
| Unique |  |  |  |  |
| Type | number | date | number | number |

**PAGOS**

**Leyenda de Constraints:**

|  |  |
| --- | --- |
| Tabla | Siglas |
| Presentaciones | kg = Kilogramos  gr = Gramos  lt = Litros  ml = Mililitros |
| Proveedores y Productores | p = Primario  s = Secundario  a = De una asociación |
| Perfumes | P = Perfume  EdP = Eau de Perfume  EdP = Eau de Toilette  EdC = Eau de Cologne  EdS = Eau de Splash  M = Masculino  F = Femenino  U = Unisex  at = Atemporal  jo = Joven  ad = Adulto  an = Anciano |
| Ingredientes | e = Esencia  c = Componente  s = Sintético  n = Natural |
| Detalles\_Perfumes | c = Corazón  f = Fondo  s = Salida |
| Metodos\_De\_Envios | a = Aéreo  m = Marítimo  t = Terrestre |
| Formulas y Evaluaciones | i = Inicial  a = Anual |
| Detalles\_Evaluaciones | a = Aprobados  r = Reprobados |
| Pedidos | p = Pendiente  e = Enviado  cprov = Cancelado por proveedor  cprod = Cancelado por productor |

**Lista de Procesos de Negocio**

1. **Registro de proveedores**
   1. **CRUD de los métodos de envío**
      1. **Consulta de un método de envió**
      2. **Creación de un método de envió**
      3. **Actualización de un método de envió**
      4. **Eliminación de un método de envió**
   2. **CRUD de los métodos de pago**
      1. **Consulta de un método de pago**
      2. **Creación de un método de pago**
      3. **Actualización de un método de pago**
      4. **Eliminación de un método de pago**
   3. **Gestión de catálogo de proveedor**
      1. **Consultar catalogo**
      2. **Agregar ítem a catalogo**
      3. **Actualizar ítem de catalogo**
      4. **Eliminar ítem de catalogo**
2. **Evaluación de Proveedores**
   1. **Gestión de Fórmula de Evaluación**
      1. **CRUD de fórmula de evaluación inicial**
         1. **Creación de fórmula inicial**
         2. **Modificación de fórmula inicial**
         3. **Eliminación de formula inicial**
         4. **Consulta de formula inicial**
      2. **CRUD de fórmula de evaluación anual**
         1. **Creación de fórmula inicial**
         2. **Modificación de fórmula inicial**
         3. **Eliminación de formula inicial**
         4. **Consulta de formula inicial**
   2. **Gestión de evaluación de proveedores**
      1. **Realizar evaluación inicial**
      2. **Consultar evaluación inicial**
      3. **Realizar evaluación anual**
      4. **Consultar evaluación anual**
   3. **Gestión de contratos**
      1. **Consultar contrato**
      2. **Generar contrato**
      3. **Renovar contrato**
      4. **Cancelar contrato**
3. **Compras a proveedores**
   1. **Administración de pedidos**
      1. **Realizar pedido**
      2. **Consultar pedido**
      3. **Cancelar pedido**
      4. **Aceptar pedido**
   2. **Gestión de facturas**
      1. **Emitir factura**
      2. **Consultar facturas**
   3. **Gestión de pagos**
      1. **Realizar pago**
      2. **Consultar pagos**
4. **Recomendador de Perfumes**