**SIT103 – Assessment Task 2 – Project Documentation and Database**

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**Question 1**

1. Business rules for [www.winelovers.com](http://www.winelovers.com):

* Each wine can only be manufactured by one winemaker
* Each winemaker can make many wines
* A winemaker can have no wine

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table Name | Attribute Name | Contents | Type | Format | Range | Required | PK or FK | FK referenced Table |
| WINE | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Wine\_Name | Name of Wine | CHAR(30) | XXX… | N/A | Y |  |  |
|  | Wine\_Vintage | Year wine was made | NUMBER(4,0) | DDDD | (0,9999) | Y |  |  |
|  | Wine\_Price | Price of wine | NUMBER(9,2) | X,XXX,XXX | X-X,XXX,XXX | Y |  |  |
|  | Winemaker\_ID | ID of winemaker | CHAR(4) | XXXX | N/A | Y | FK | WINEMAKER |
| WINEMAKER | Winemaker\_ID | Winemakers id | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Winemaker\_Name | Winemakers name | CHAR(30) | XXX… | N/A | Y |  |  |

c)



d) SQL script and its text outputs are within the ZIP file, see q1.sql and q1.txt.

**Question2**

1. Business rules for [www.winelovers.com](http://www.winelovers.com):

* Each wine can be sold by several retailers. (M:M)
* Each retailer can sell many wines. (M:M)
* A retailer can have no wine. (0:N)
* Wine might not be sold by any retailer. (0:N)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table Name | Attribute Name | Contents | Type | Format | Range | Required | PK or FK | FK referenced Table |
| WINE | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Wine\_Name | Name of Wine | CHAR(30) | XXX… | N/A | Y |  |  |
|  | Wine\_Vintage | Year wine was made | NUMBER(4,0) | DDDD | (0,9999) | Y |  |  |
|  | Wine\_Price | Price of wine | NUMBER(9,2) | X,XXX,XXX | X-X,XXX,XXX | Y |  |  |
|  | Retailer\_ID | ID of Retailer | CHAR(4) | XXXX | N/A | Y | PK/FK | RETAILER |
| RETAILER | Retailer\_ID | Retailers ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Retailer\_Name | Retailers Name | CHAR(30) | XXX… | N/A | Y |  |  |



1. SQL script and its text outputs are within the ZIP file, see q2.sql and q2.txt.

**Question 3**

1. Business rules for [www.winelovers.com](http://www.winelovers.com):

* A wine can be sold by several retailers (1:M)
* A wine might not be sold by any retailer (1:N)
* A retailer can sell several wines (1:M)
* A retailer can sell no wine (1:N)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table Name | Attribute Name | Contents | Type | Format | Range | Required | PK or FK | FK referenced Table |
| WINE | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Wine\_Name | Name of Wine | CHAR(30) | XXX… | N/A | Y |  |  |
|  | Wine\_Vintage | Year wine was made | NUMBER(4,0) | DDDD | (0,9999) | Y |  |  |
| RETAILER | Retailer\_ID | Retailers ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Retailer\_Name | Retailers Name | CHAR(30) | XXX… | N/A | Y |  |  |
| SELLS | Retailer\_ID | Retailers ID | CHAR(4) | XXXX | N/A | Y | PK/FK | RETAILER |
|  | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK/FK | WINE |
|  | Wine\_Price | Price of wine | NUMBER(9,2) | X,XXX,XXX | X-X,XXX,XXX | Y |  |  |



1. SQL script and its text outputs are within the ZIP file, see q3.sql and q3.txt.

**Question 4**

1. Business rules for [www.winelovers.com](http://www.winelovers.com):

* A wine can only be manufactured by one winemaker.
* A winemaker can manufacture many wines.
* A winemaker can manufacture no wine.
* Each wine can be sold by several retailers.
* Each retailer can sell many wines.
* A wine might not be sold by a retailer.
* A retailer might not sell any wine.
* Wine can go well with many foods.
* Food can go well with many wines.
* Wine might not go well with any food.
* Food might not go well with any wine.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table Name | Attribute Name | Contents | Type | Format | Range | Required | PK or FK | FK referenced Table |
| WINE | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Wine\_Name | Name of Wine | CHAR(30) | XXX… | N/A | Y |  |  |
|  | Wine\_Vintage | Year wine was made | NUMBER(4,0) | DDDD | (0,9999) | Y |  |  |
| RETAILER | Retailer\_ID | Retailers ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Retailer\_Name | Retailers Name | CHAR(30) | XXX… | N/A | Y |  |  |
| SELLS | Retailer\_ID | Retailers ID | CHAR(4) | XXXX | N/A | Y | PK/FK | RETAILER |
|  | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK/FK | WINE |
|  | Wine\_Price | Price of wine | NUMBER(9,2) | X,XXX,XXX | X-X,XXX,XXX | Y |  |  |
| WINEMAKER | Winemaker\_ID | Winemakers id | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Winemaker\_Name | Winemakers name | CHAR(30) | XXX… | N/A | Y |  |  |
| MANUFACTURES | Winemaker\_ID | Winemakers id | CHAR(4) | XXXX | N/A | Y | PK/FK | WINEMAKER |
|  | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK/FK | WINE |
| FOOD | Food\_ID | Food ID | CHAR(4) | XXXX | N/A | Y | PK |  |
|  | Food\_Desc | Description of the Food | VCHAR(30) | XXX.. | N/A | Y |  |  |
| SCORE | Score\_ID | Score Number | CHAR(2) | XX | N/A | Y | PK |  |
|  | Score\_Desc | Description of the Score | CHAR(20) | XXX… | N/A | Y |  |  |
| RATING | Food\_ID | Food ID | CHAR(4) | XXXX | N/A | Y | PK/FK | FOOD |
|  | Wine\_ID | Wine ID | CHAR(4) | XXXX | N/A | Y | PK/FK | WINE |
|  | Score\_ID | Score Number | CHAR(2) | XX | N/A | Y | PK/FK | SCORE |

1. SQL script and its text outputs are within the ZIP file, see q4.sql and q4.txt.