**OPIM 3221 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Assignment #2 - Logical Design (100 points)**

**Problem 1 -**

Using the following relational database, **write out each relationship** between the tables below including primary and foreign key information. Make sure to include relationship type and cardinality for full credit. (Hint: There are 5 relationships you must list)

Grading Rubric: **(Total 40 points)**

* 8 points for correctly identifying each relationship from the tables
  + 2 points for listing the cardinality and modality of each relationship indicating the PK and FK along with names of entities involved

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employee#** | **Name** | **Position** | **Year**  **Hired** | **Supervisor Number** | **Department Name** |

**OFFICE STAFF**

|  |  |  |  |
| --- | --- | --- | --- |
| **Department**  **Name** | **Unit**  **Number** | **Building\_Loc** | **Size** |

**DEPARTMENT**

****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SalespersonID** | **Name** | **Office**  **Number** | **Telephone#** | **Department Name** | **BackupID** |

**SALESPERSON**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Buyer**  **Number** | **Buyer**  **Name** | **Age** | **Address** | **City** | **State** |

**BUYER**

|  |  |  |
| --- | --- | --- |
| **Lead**  **Name** | **Type** | **DateofContact** |

**LEADS**

****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Department**  **Name** | **Buyer**  **Number** | **SalespersonID** | **Sale\_Date** | **Price\_sold** | **Type\_of\_Loan** |

**CAR PURCHASE**



**Problem 2 -**

Using the following Relational Diagram, convert this business environment into a well-structured database by drawing out all corresponding relational tables. **Make sure to indicate all primary and foreign key relationships**. Use proper notation for all values and make sure to include each table and field as shown for full credit.

Grading Rubric: **(Total 60 points)**

* 1 point for each correctly identified table name and fields listed
* 2 points for each correctly identified PK and FKs

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Store\_ID** | **Address** | **City** | **State** | **Zip Code** |

**LOCATIONS**

****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employee\_ID** | **Name** | **Position** | **Wage Rate** | **Start Date** | **Store\_ID** |

**EMPLOYEES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Supplier\_ID** | **Company\_Name** | **Address** | **Phone#** | **Shipping Rates** |

**SUPPLIERS**

****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Product\_ID** | **Product**  **Name** | **Price** | **Cost** | **Expiration Date** | **Supplier\_ID** |

**PRODUCTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer\_ID** | **Name** | **Food Satisfaction** | **Email** | **Loyalty Program#** |

**CUSTOMERS**

****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Customer\_ID** | **Product\_ID** | **Employee\_ID** | **Order Time** | **Cost** | **Food Satisfaction** |

**ORDERS**