SQL Task

Let us have the following DB scheme.

**po Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | id | Int | Identifier of a purchase order (PO) |
| FK | vendorId | Int | Id of the vendor |
|  | dateIssued | datetime | Date when the order was issued to the vendor |
|  | dateCompleted | datetime | Date when the order was completed |
|  | dateConfirmed | datetime | Date when the order was confirmed |
|  | dateCreated | datetime | Date when the order was created |
| FK | locationGroupId | Int | Id of the locationGroup this order is delivered to. |
|  | deliverTo | varchar | Who this order is delivered to. |
|  | shipToAddress | varchar | The address the order is delivered to. |
| FK | statusId | int | Id of the order status. |
|  | num | varchar | Order number. |
|  | note | varchar | A note for the order. |

**poStatus Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | Id | Int | Identifier |
|  | Name | varchar | Status name |

The content of the **poStatus Table** (statuses are listed in the order of PO processing).

|  |  |  |
| --- | --- | --- |
| *Id* | *Name* | *Description* |
| 10 | Bid request | A draft state. It doesn’t affect the quantity in-transit. |
| 20 | Issued | The order was issued to the vendor. It increases the quantity in-transit. |
| 30 | Picking | The order is being piked currently. In this state the quantity in-transit is still increased. |
| 40 | Partial | Partially received order. (Some of the lines maybe received and some don’t.). In this state the quantity in-transit is still increased for the undelivered part of the order. |
| 50 | Picked | The order is fully picked. In this state the quantity in-transit is still increased. |
| 55 | Shipped | The order is shipped. This state increases the on-hand quantity and decreases the quantity in-transit. |
| 60 | Fulfilled | The order is fulfilled and closed. |
| 70 | Closed Short | The order is closed before fully fulfilled. |
| 80 | Void | The order is voided. |

**poItem Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | id | Int | Identifier of PO line item |
| FK | poId | Int | Id of the purchase order |
|  | dateScheduledFulfillment | datetime | Scheduled date of future fulfillment |
|  | dateLastFulfillment | datetime | Date of the last fulfillment |
|  | partNum | varchar | Part number |
| FK | poItemTypeId | Int | Type of PO line |
| FK | partId | Int | The identifier of the part |
|  | poLineItem | Int | The ordinal number of the line in PO |
|  | qtyFulfilled | decimal | Quantity received |
|  | qtyToFulfill | decimal | Quantity ordered |
| FK | uomId | Int | Id of unit of measure of the order line item. |
| FK | typeId | Int | Id of the order line type. |
|  | unitCost | decimal | Cost of one unit of the order line item. |

**poItemType Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | Id | Int | Identifier |
|  | Name | varchar | Type name |

The content of the **poItemType Table**.

|  |  |  |
| --- | --- | --- |
| *Id* | *Name* | *Description* |
| 10 | Purchase | A purchase of a part item from vendor. |
| 11 | Misc. Purchase | Purchase of a free-form item that doesn't belong to inventory, for example, services. |
| 20 | Credit Return | A return of a part item to vendor. |
| 21 | Misc. Credits | A return of a free-form item to vendor. |
| 30 | Out Sourced | Item that is sent to vendor for a customization and then received back into inventory. |

**part Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | id | Int | Part identifier |
|  | activeFlag | Bit | Flag indicating if this part is currently active. |
|  | description | varchar | Description of the part |
|  | num | varchar | Part number |
| FK | typeId | Int | Id of the part type |
| FK | uomId | int | Id of the default unit of measure of the part |

**partType Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | Id | Int | Identifier |
|  | Name | varchar | Type name |

The content of the **partType Table**.

|  |  |  |
| --- | --- | --- |
| *Id* | *Name* | *Description* |
| 10 | Inventory | Can be purchased and sold and stocked in inventory. |
| 20 | Service | Can be purchased and sold but is not stocked in inventory. |
| 30 | Non-inventory | Can be purchased and sold but is not tracked in inventory. |
| 40 | Internal use | Can be purchased but is not sold or stocked in inventory. |
| 50 | Capital equipment | Equipment that depreciates in value and can be purchased but is not sold or stocked in inventory. |
| 60 | Shipping | Can be purchased or sold, but is not stocked in inventory. |
| 70 | Tax | A tax that is added to a purchase or sales order. |
| 80 | Mics | Can be purchased and sold but is not tracked in inventory. |

**locationGroup** **Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | id | Int | Identifier of locationGroup (warehouse) |
|  | activeFlag | bit | Flag indicating if this locationGroup is currently active. |
|  | name | varchar | Name of the locationGroup |

**Vendor Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | id | Int | Identifier of the vendor |
|  | activeFlag | bit | Flag indicating if this vendor is currently active. |
|  | name | varchar | Name of the vendor |

**uomConversion Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | Id | Int | Identifier of conversion rule |
|  | factor | double | How many fromUomId is in toUomId |
| FK | fromUomId | Int | Identifier of unit of measure (UOM) |
|  | multiply | Double | How many toUomId is in fromUomId |
| FK | toUomId | int | Identifier of UOM |

**uom Table**

|  |  |  |  |
| --- | --- | --- | --- |
| *Keys* | *Column name* | *Type* | *Description* |
| PK | Id | Int | UOM identifier |
|  | Code | varchar | UOM code |
|  | Description | Varchar | UOM description |
|  | name | Varchar | UOM name |
|  | activeFlag | bit | Flag indicating if this UOM is currently active. |

Diagram, schematic

Description automatically generated

The task is to write a SQL-query that returns parts that are in-transit from vendors to warehouses. The query should return columns listed below.

|  |  |
| --- | --- |
| *Column* | *Description* |
| sku | Part number that is in-transit. |
| location | Warehouse the part should be delivered to. |
| qty | The part quantity that is in-transit in the default UOM. This amount should also account for partially delivered PO line. |
| deliveryDate | Expected delivery date. |
| sendoutDate | Date then the PO was sent to the vendor. |
| lotCost | PO line cost. |
| orderNumber | PO number. |
| sourceFrom | Vendor name. |