T-SQL Queries for AdventureWorks Database

The AdventureWorks sample database supports standard online transaction processing scenarios for a fictitious product manufacturer and reseller named AdventureWorks. The company manufactures sports and leisure products for sale to both individuals and stores around the world. AdventureWorks also purchases products from different vendors for resale. The company employs 290 employees, with several regional sales teams located throughout their market base. Scenarios that are represented in the sample database include Manufacturing, Sales, Purchasing, Product Management, Contact Management, and Human Resources.

1.Displaying a list of all Level 1 employees showing the BusinessEntityID, national ID number, first name, last name, department name and job title. Ensuring that an employee is associated with only the current department with no duplicates.

```sql
SELECT
    e.BusinessEntityID,
    e.NationalIDNumber,
    p.FirstName,
    p.LastName,
    d.Name AS Department,
    e.JobTitle
FROM
    HumanResources.Employee e
INNER JOIN
    Person.Person p ON e.BusinessEntityID = p.BusinessEntityID
INNER JOIN
    HumanResources.EmployeeDepartmentHistory edh ON e.BusinessEntityID = edh.BusinessEntityID
INNER JOIN
    HumanResources.Department d ON edh.DepartmentID = d.DepartmentID
WHERE
```

Output

	BusinessEntityID	NationalIDNumber	FirstName	LastName	Department	JobTitle
1	2	245797967	Terri	Duffy	Engineering	Vice President of Engineering
2	16	24756624	David	Bradley	Purchasing	Marketing Manager
3	16	24756624	David	Bradley	Marketing	Marketing Manager
4	25	519899904	James	Hamilton	Production	Vice President of Production
5	234	184188301	Laura	Norman	Finance	Chief Financial Officer
6	234	184188301	Laura	Norman	Executive	Chief Financial Officer
7	263	441044382	Jean	Trenary	Information Services	Information Services Manager
8	273	112432117	Brian	Welcker	Sales	Vice President of Sales

2.Displaying the account number, vendor name and credit rating for those vendors sorted in alphabetical order using outer joins and subqueries.

```
--a) outter join
SELECT
    v.AccountNumber,
    v.Name AS VendorName,
    v.CreditRating
FROM
    Purchasing.Vendor v
LEFT OUTER JOIN
    Purchasing.ProductVendor pv ON v.BusinessEntityID = pv.BusinessEntityID
WHERE
    pv.ProductID IS NULL
ORDER BY
    v.Name ASC;


SELECT
    v.AccountNumber,
    v.Name AS VendorName,
```

```
SELECT
    v.AccountNumber,
    v.Name AS VendorName,
    v.CreditRating
FROM
    Purchasing.Vendor v
WHERE
    v.BusinessEntityID NOT IN (SELECT pv.BusinessEntityID FROM Purchasing.ProductVendor pv)
ORDER BY
    v.Name ASC;
```

Output

	AccountNumber	VendorName	CreditRating
1	ADATUM0001	A. Datum Corporation	1
2	CYCLING0001	Cycling Master	1
3	ELECTRON0001	Electronic Bike Co.	1
4	GMASKI0001	GMA Ski & Bike	1
5	HOLIDAY0001	Holiday Skate & Cycle	1
6	ILLINOIS0001	Illinois Trek & Clothi...	1
7	IMAGEMA0001	Image Makers Bike ...	1

Query executed successfully.   FAITH_MALATJI\SQLEXPRESS (1... FAITH_MALATJI\ACER (77) AdventureWorks2022 00:00:26 185 rows

3. A query that displays the sum of all purchase orders and sum of all sales orders per each shipping method using the TotalDue column. All shipping methods are displayed regardless of whether they have matching sales or purchases.

```
SELECT
    sm.ShipMethodID,
    sm.Name AS SName,

    ROUND(SUM(soh.TotalDue), 2) AS TotalSales,
    ROUND(SUM(poh.TotalDue), 2) AS TotalPurchases

FROM
    Purchasing.ShipMethod sm
LEFT OUTER JOIN
    Sales.SalesOrderHeader soh ON sm.ShipMethodID = soh.ShipMethodID
LEFT OUTER JOIN
    Purchasing.PurchaseOrderHeader poh ON sm.ShipMethodID = poh.ShipMethodID
GROUP BY
    sm.ShipMethodID,
    sm.Name
ORDER BY
    sm.ShipMethodID;
```

Output

9	KNOPFLER00...	Knopfler Cycles	1	
10	LEGENDC0001	Legend Cycles	1	
11	LIGHTSP0001	Light Speed	1	
12	MAGICCY0001	Magic Cycles	1	

	ShipMethodID	SName	TotalSales	TotalPurchases
1	1	XRQ - TRUCK GROUND	19107948743.33	92129620043.81
2	2	ZY - EXPRESS	NULL	14874601.77
3	3	OVERSEAS - DELUXE	NULL	8002939.00
4	4	OVERNIGHT J-FAST	NULL	11965191.19
5	5	CARGO TRANSPORT 5	138251005770...	122955461456...

	ProductNumber	ProductName	SubCategory	ProductClass
1	BB-7421	LL Bottom Bracket	Bottom Brackets	Low
2	BB-8107	ML Bottom Bracket	Bottom Brackets	Medium
3	BB-9108	HL Bottom Bracket	Bottom Brackets	High
4	BK-M18B-40	Mountain-500 Bl...	Mountain Bikes	Low
5	BK-M18B-42	Mountain-500 Bl...	Mountain Bikes	Low
6	BK-M18B-44	Mountain-500 Bl...	Mountain Bikes	Low