TSQL Dynamic Pivot

How to Pivot SQL Data dynamically

Jerry Payne

I always find the need to pivot data, but don't always know the data that I need to pivot. Currently, with TSQL you have to 'Explicitly' list the Data that you want, as column names. But what if you don't know, or what if there is a new entry in the table that you need to pivot. This has plagued me for years, and I have finally found a solution.

First, I will list the functions I used. Then we can create a table, and insert some data.

STUFF Function: https://docs.microsoft.com/en-us/sql/t-sql/functions/stuff-transact-sql?view=sql-server-ver15

```
STUFF ( character_expression,
start , length , replaceWith_expression )
```

QUOTENAME Function: https://docs.microsoft.com/en-us/sql/t-sql/functions/quotename-transact-sql?view=sql-server-ver15

```
QUOTENAME ( 'character_string' [ , 'quote_character' ] )
```

FOR XML Function: https://docs.microsoft.com/en-us/sql/relational-databases/xml/for-xml-sql-server?view=sql-server-ver15

Create table

```
CREATE TABLE dbo.PivotTest
(
UnitNumber VARCHAR(10) NOT NULL,
PayrollDate DATE NOT NULL,
GrossRevenue DECIMAL(9,2) NOT NULL
);
```

Insert Data

```
INSERT INTO dbo.PivotTest
(UnitNumber, PayrollDate, GrossRevenue)
VALUES
('111','1/1/2019','1000'),
('222','1/1/2019','2000'),
```

```
('111','2/1/2019','3000'),
('222','2/1/2019','4000'),
('111','3/1/2019','1000'),
('222','3/1/2019','5000'),
('111','4/1/2019','3000'),
('222','4/1/2019','2000');
```

2 / 2

```sql
SELECT
    STUFF(
        (SELECT DISTINCT ', ' +
        QUOTENAME([PayrollDate])
FROM
    dbo.PivotTest FOR XML PATH ('')),1,2,'')
```