

Bu sorgu, "Strateji" kategorisinde oyunu olmayan ve son 1 yıl içinde "Aile" kategorisinde bir oyun satın alan üyelerin ülkelerini ve her ülkedeki üye sayısını listeler.

```
SET STATISTICS IO ON;
```

```
SELECT Ulke.Ad, COUNT(Uye.ID) AS UyeSayisi
FROM tbl_uye AS Uye
INNER JOIN tbl_adres AS Adres ON Uye.Adres_ID = Adres.ID
INNER JOIN tbl_ulke AS Ulke ON Adres.Ulke_kodu = Ulke.Kod
WHERE Uye.ID NOT IN (
    SELECT Koleksiyon.Uye_ID
    FROM tbl_koleksiyon AS Koleksiyon
    INNER JOIN tbl_boardgame AS Oyun ON Koleksiyon.Oyun_ID = Oyun.ID
    INNER JOIN tbl_oyun_kategori AS OyunKategori ON oyun.ID = OyunKategori.Oyun_ID
    INNER JOIN tbl_kategori AS Kategori ON OyunKategori.Kategori_ID = Kategori.ID
    WHERE Kategori.Ad = 'Strateji'
)
AND EXISTS (
    SELECT *
    FROM tbl_koleksiyon AS Koleksiyon
    INNER JOIN tbl_boardgame AS Oyun ON Koleksiyon.Oyun_ID = Oyun.ID
    INNER JOIN tbl_oyun_kategori AS OyunKategori ON Oyun.ID = OyunKategori.Oyun_ID
    INNER JOIN tbl_kategori AS Kategori ON OyunKategori.Kategori_ID = Kategori.ID
    WHERE Kategori.Ad = 'Aile' AND Uye.ID = Koleksiyon.Uye_ID AND
    YEAR(Oyun.Cikis_tarihi) = YEAR(GETDATE()) - 1
)
GROUP BY Ulke.Ad
HAVING COUNT(Uye.ID) > 10
ORDER BY CASE
    WHEN COUNT(Uye.ID) BETWEEN 10 AND 50 THEN Ulke.Ad
    ELSE Ulke.Ad END ASC,
    COUNT(Uye.ID) DESC
```

```
(3 rows affected)
```

```
Table 'Worktable'. Scan count 181, logical reads 993, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_ulke'. Scan count 0, logical reads 110, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_adres'. Scan count 0, logical reads 110, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_koleksiyon'. Scan count 2, logical reads 8, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_oyun_kategori'. Scan count 62, logical reads 124, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_kategori'. Scan count 2, logical reads 128, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_uye'. Scan count 0, logical reads 122, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'Workfile'. Scan count 0, logical reads 0, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_boardgame'. Scan count 0, logical reads 10, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
```

```
Completion time: 2023-12-25T23:01:34.5376502+03:00
```

Ekran görüntüsü böyledir.

Aynı sorguyu index'ler tanımlayarak yapalım:

```
-- Ulke tablosu için index
CREATE NONCLUSTERED INDEX IX_Ulke_Kod ON tbl_ulke(Kod);
```

```

-- Adres tablosu için index
CREATE NONCLUSTERED INDEX IX_Adres_ID ON tbl_adres(ID);

-- Uye tablosu için index
CREATE NONCLUSTERED INDEX IX_Uye_Adres_ID ON tbl_uye(Adres_ID, ID);

-- Koleksiyon tablosu için index
CREATE NONCLUSTERED INDEX IX_Koleksiyon_Uye_ID_Oyun_ID ON tbl_koleksiyon(Uye_ID,
Oyun_ID);

-- Oyun tablosu için index
CREATE NONCLUSTERED INDEX IX_Oyun_ID_CikisTarihi ON tbl_boardgame(ID, Cikis_tarihi);

-- OyunKategori tablosu için index
CREATE NONCLUSTERED INDEX IX_OyunKategori_Oyun_ID_Kategori_ID ON
tbl_oyun_kategori(Oyun_ID, Kategori_ID);

-- Kategori tablosu için index
CREATE NONCLUSTERED INDEX IX_Kategori_Ad ON tbl_kategori(Ad);

SET STATISTICS IO ON;

```

```

SELECT Ulke.Ad, COUNT(Uye.ID) AS UyeSayisi
FROM tbl_uye AS Uye
INNER JOIN tbl_adres AS Adres ON Uye.Adres_ID = Adres.ID
INNER JOIN tbl_ulke AS Ulke ON Adres.Ulke_kodu = Ulke.Kod
WHERE Uye.ID NOT IN (
    SELECT Koleksiyon.Uye_ID
    FROM tbl_koleksiyon AS Koleksiyon
    INNER JOIN tbl_boardgame AS Oyun ON Koleksiyon.Oyun_ID = Oyun.ID
    INNER JOIN tbl_oyun_kategori AS OyunKategori ON oyun.ID = OyunKategori.Oyun_ID
    INNER JOIN tbl_kategori AS Kategori ON OyunKategori.Kategori_ID = Kategori.ID
    WHERE Kategori.Ad = 'Strateji'
)
AND EXISTS (
    SELECT *
    FROM tbl_koleksiyon AS Koleksiyon
    INNER JOIN tbl_boardgame AS Oyun ON Koleksiyon.Oyun_ID = Oyun.ID
    INNER JOIN tbl_oyun_kategori AS OyunKategori ON Oyun.ID = OyunKategori.Oyun_ID
    INNER JOIN tbl_kategori AS Kategori ON OyunKategori.Kategori_ID = Kategori.ID
    WHERE Kategori.Ad = 'Aile' AND Uye.ID = Koleksiyon.Uye_ID AND
    YEAR(Oyun.Cikis_tarihi) = YEAR(GETDATE()) - 1
)
GROUP BY Ulke.Ad
HAVING COUNT(Uye.ID) > 10
ORDER BY CASE
    WHEN COUNT(Uye.ID) BETWEEN 10 AND 50 THEN Ulke.Ad
    ELSE Ulke.Ad END ASC,
    COUNT(Uye.ID) DESC

```

```
(3 rows affected)
Table 'Worktable'. Scan count 0, logical reads 0, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_ulke'. Scan count 0, logical reads 110, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_adres'. Scan count 0, logical reads 110, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_koleksiyon'. Scan count 182, logical reads 364, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_oyun_kategori'. Scan count 62, logical reads 124, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_kategori'. Scan count 62, logical reads 124, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_uye'. Scan count 0, logical reads 122, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'Workfile'. Scan count 0, logical reads 0, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0
Table 'tbl_boardgame'. Scan count 5, logical reads 10, physical reads 0, page server reads 0, read-ahead reads 0, page server reads 0

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```

Görüldüğü gibi Logical Read değerleri azalmıştır.