

Assignment 3 DBT

Details :

- Name : P K Navin Shrinivas
- SRN : PES2UG20CS237
- Section : D

Task A :

- Creating partitions and inserting a million rows :
- Code :

```
-- create database partdb
use partdb
EXEC sp_configure 'show advanced options', 1;
GO
RECONFIGURE WITH OVERRIDE;
GO
EXEC sp_configure 'max degree of parallelism', 4;
GO
RECONFIGURE WITH OVERRIDE;
GO
CREATE PARTITION FUNCTION CustRangePF11 (char)
AS RANGE LEFT FOR VALUES ('c','e') ; -- ab cd ef left
ranges
GO
ALTER DATABASE [partdb] ADD FILEGROUP [FG1]
GO
USE [partdb]
GO
ALTER DATABASE [partdb] ADD FILEGROUP [FG2]
GO
ALTER DATABASE [partdb] ADD FILE ( NAME = N'testFG1',
```

```

FILENAME = '/var/opt/mssql/data/test1.md' , SIZE =
8192KB , FILEGROWTH = 65536KB ) TO FILEGROUP [FG1]
GO
ALTER DATABASE [partdb] ADD FILE ( NAME = N'testFG2',
FILENAME = '/var/opt/mssql/data/test2.md' , SIZE =
8192KB , FILEGROWTH = 65536KB ) TO FILEGROUP [FG2]
GO
ALTER DATABASE [partdb] ADD FILEGROUP [FG3]
GO
ALTER DATABASE [partdb] ADD FILE ( NAME = N'testFG3',
FILENAME = '/var/opt/mssql/data/test3.md' , SIZE =
8192KB , FILEGROWTH = 65536KB ) TO FILEGROUP [FG3]
GO
CREATE PARTITION SCHEME CustRangePS1
AS PARTITION CustRangePF11
TO (FG1, FG2, FG3) ;
GO
CREATE TABLE students_no_index(SRN VARCHAR(15),
student_name varchar(20), DOB DATETIME, branch CHAR(3),
section char(1)) ON CustRangePS1 (section) ;
DECLARE @counter SMALLINT;
SET @counter = 0;
WHILE @counter < 1000000
BEGIN
DECLARE @localsection char;
SELECT @localsection = CONVERT(varchar(255), NEWID())
insert into students_no_index values
('PES2UG20CS237'+@localsection,'andomlygenerated'+@local
section,'11/10/2002','CSE',@localsection);
SET @counter = @counter + 1
END;
GO

```


58

59 `select count(*) from students_no_index as s JOIN teachers_no_index as t ON s.branch=t.branch AND s.section='C';`

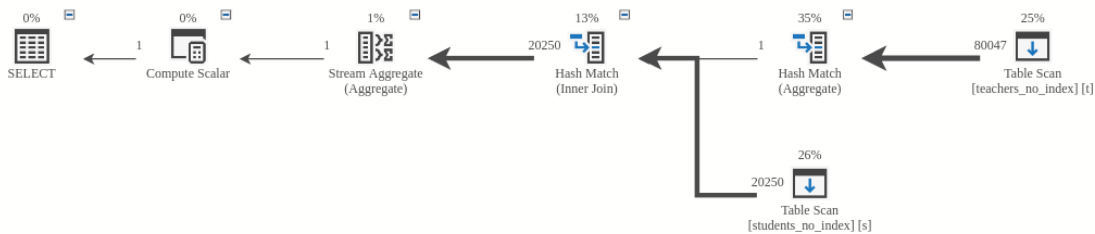
Results Messages **Query Plan** Plan Tree Top Operations

Query 1: Query cost (relative to the script): 100.00%

select count(*) from students_no_index as s JOIN teachers_no_index as t ON s.branch=t.branch AND s.section='C'

Missing Index (Impact 26.2434): CREATE NONCLUSTERED INDEX [<Name of Missing Index, sysname,>] ON [dbo].[students_no_index] ([section]) INCLUDE (

Missing Index (Impact 37.1902): CREATE NONCLUSTERED INDEX [<Name of Missing Index, sysname,>] ON [dbo].[students_no_index] ([branch],[section])



- Cost : 0.8922026

Note : The second query was not based on partition and hence a very high time for execution can be observed.