Aula Prática 8

Gonçalo Abrantes – 104152

Guilherme Antunes – 103600

8.1

#	Query	Rows	Cost	Pag. Reads	Time (ms)	Index used	Index Op.	Index Creation SQL
1	select * from Production.WorkOrder	72591	.488021	722	815	WorkOrderID (PK)	Clustered Index Scan	
2	select * from Production.WorkOrder where WorkOrderID=1234	1	.0032833	14	54	WorkOrderID (PK)	Clustered Index Seek	
3.1	SELECT * FROM Production.WorkOrder WHERE WorkOrderID between 10000 and 10010	11	.0032976	196	78	WorkOrderID (PK)	Clustered Index Seek	
3.2	SELECT * FROM Production.WorkOrder WHERE WorkOrderID between 1 and 72591	72591	.488021	724	737	WorkOrderID (PK)	Clustered Index Seek	
4	SELECT * FROM Production.WorkOrder WHERE StartDate = '2007-06-25'	55	.522864	724	189	WorkOrderID (PK)	Clustered Index Scan	
5	SELECT * FROM Production.WorkOrder WHERE ProductID = 757	9	.037359	846	316	ProductID	Nonclustered Index Seek, Clustered Key Lookup	CREATE INDEX idx ON Production.WorkOrder(ProductID)
6.1	SELECT WorkOrderID, StartDate FROM Production.WorkOrder WHERE ProductID = 757	9	.0032945	1411	312	ProductID Covered (StartDate)	Nonclustered Index Seek	CREATE INDEX idx ON Production.WorkOrder (ProductID) INCLUDE (StartDate)
6.2	SELECT WorkOrderID, StartDate FROM Production.WorkOrder WHERE ProductID = 945	1105	.0059894	1461	302	ProductID Covered (StartDate)	Nonclustered Index Seek	CREATE INDEX idx ON Production.WorkOrder (ProductID) INCLUDE (StartDate)
6.3	SELECT WorkOrderID FROM Production.WorkOrder WHERE ProductID = 945 AND StartDate = '2006-01-04'	1	.0059894	1419	330	ProductID Covered (StartDate)	Nonclustered Index Seek	CREATE INDEX idx ON Production.WorkOrder (ProductID) INCLUDE (StartDate)
7	SELECT WorkOrderID, StartDate FROM Production.WorkOrder WHERE ProductID = 945 AND StartDate = '2006-01-04'	1	.0167833	1408	308	ProductID and StartDate	Nonclustered Index Seek	CREATE INDEX idx ON Production.WorkOrder(StartDate)
8	SELECT WorkOrderID, StartDate FROM Production.WorkOrder WHERE ProductID = 945 AND StartDate = '2006-01-04'	1	.0032831	1649	393	Composite (ProductID, StartDate)	Nonclustered Index Seek	CREATE INDEX idx ON Production.WorkOrder(ProductID, StartDate)

8.2

Combinações	Fragmentação dos índices (%)	Ocupação das páginas (%)	Tempo de inserção (ms)
fillfactor = 65	99,16	68,89	39043
fillfactor = 80	98,72	68,37	39506
fillfactor = 90	98,85	67,51	39843
identity e fillfactor =65	98,93	68,21	40170
identity e fillfactor =80	90,05	68,53	40603
identity e fillfactor =90	90,05	68,45	40776
Alínea e) com índice			50690
Alínea e) sem índice			37333

e) Podemos que concluir que a inserção dos índices é mais lenta

8.3

a)

i) Create unique clustered index PK_Ssn on EMPLOYEE(Ssn)

ii) Create nonclustered index IX_CompleteName on EMPLOYEE(Fname,Lname

iii) Create unique clustered index PK_Dnumber on DEPARTMENT(Dnumber

Create nonclustered index IX_DepNumber on EMPLOYEE(Dno)

iv) Create unique clustered index PK_Ssn on EMPLOYEE(Ssn)
Create unique clustered index PK_EssnPno on WORKS_ON(Essn, Pno)
Create nonclustered index PK_Pnumber on PROJECT(Pnumber)