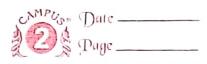


	Materialization Pileling
	It is a braditional i) It is a modern
	afferoach to evaluate afferoach to evaluate
	multiple oferations. multiple operations.
0.	It uses temporary relations? It does not use any
· · · · · · · · · · · · · · · · · · ·	from storing the nesults of temporary relations for
	The explicated offerations storing the results of
1	So it needs more temporary the evaluated operations.
-	Lifes And I/O
<u>;;;)</u>	It is less efficient as 19) It is more efficient
	let lake have he aggreget una cot query evaluation
	The allery gestellts as it quoting jerice
1	
	It does not have any (1) It nequires memory
-	higher requirements for butter at a right fact
	memory bussens too query ton generating characters
	pialuation incusticient memory and
	1000
(<u> </u>	No therashing occurs in V Pour jeen ronne
	materialization hus in thousing occurs
	Cases materialization is
	having be Hen Pentamana land It offices the cost of
	The overall cost includes vi) It offinizes the cost of the cost of operations query evaluation As it does
	neading and writing greating and writing the greatly on temporary eterge temperary storages.
	Siesucis or original
0	Advantages & i) Reduce the search space for oftimization strategy.
	Oftimization storategy.
	00



-	
?0)	Allows the query offinizes to be based on dynamic forcessing technique. Convinient for Pipelining.
	dynamic forocessing technique.
111	convinient for Pipelining.
	Disadvantages &:) Reduction of scarch space might
	Disadvantagesti) Reduction of scarch eface might. Skif some low cost evaluation techniques
- 1	techniques. Only fully Pipelined strategies are used. Many alternative execution strategies are not considered.
11)	Only July Pipelined storategies are used.
111	Many alternative execution strategies are
+	not Considered
5) (4)	SI: Original = 1 a hateland = "Moor" (Room)
	SC: Al soom no l'hotel no as key affeibule
1.0	linear land catal
14	SI: Orienno=1 a hatelow = 'Moo! (Room) SC = 1 as soom no l'hotel no as key afferibule of soom taking hash = Cast - 1 Linear Search Cost = [10000/2000] 2 = 25
	Sa: Tive : 'D' (Room)
3	SQ: Tige: D' (Room) SC type (Room) = ntufles (Room) / ndistinct type (Room) = 10000/10 = 1000
4 100 2	= 10000/10 = 1000
	Cost = \$12+1000 200 = 5
	Linear Search Cost = 50
*	
•	S3: Theklus = 4002, (Room)
-	SC MORENO (Room) = 10000/50 = 200
	(ost = 21 200/200 - 3
	S4: Thice > loo (hoom)
	Cost 2 + (50/2) + 1000/2 = 5027
	Linear cearch = 50
	Director Southern - GO
	SS: Tyge ='S' 1 hotel No = '4003' (loom)
	of the state of th



	secondary incles searches costs are 543
	linear Cast : 50
1	
	86: Oyle: 's' V feice = 100 (Room)
	Use secondary index on type & frice take union linear search last = 50
	linear search last = 50
5	and the state of t
<i>b</i>)	J1: (HoTel) & hotelwo (Room)
i A	Assume NBuston = 100
	Block nested loop = n Blocks (Room) = 10000/200 = 50
	nBlock (Motel) = 50/40/ -1
	R= Hotel = S= Room
	If buffer has I block for R&S
	Cost = nBlock (R) + nBlock(R) & nBlocks (S)
	= 11 (Sox2) = 102
	If R(notel) lik no buffer
	Cost = nBlock (R) + nBlocks (S) = 5012:52
	As notel is brimany Key
	As notel is frimery key n blocks (R) + n Tuples (R) x n Levels notel no 1 (SCA R)
	2 150 ((211)= 21 150= 152
	Bost mage
	n blocks (R) + [log, (nblock, (R)] + n Blocks (s) [log, n
	blocks (s)/
	= 2 * log. (2) + 50 * [log. (50)] = 2 + 250 = 252
	= 9 250 = 252
	for merge = 50+2
	Flash
	If hash lits into memory
	If hash life anto memory 2(n Blocks CR) + n Blocks (S)
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Jo : (Booking) e nom No (Room)
	Scanned with CamScanner



	nBlocks (Booking) = 1667
1	n Blocks (Room) = 50
	If I block is allowed =
	· nBlock (R) - (n Block(R) * n Block (S))
	= 50 + 50 * 1667 = 83400
·.	If soon fit in memory:
	If soon fits in memory: n Blocks (R) + n Blocks (s) = 50 + 1667 = 1717
	Your Marga
	If unscarted nBlack (R) [lag, (n Black l) + n Black (s) = 50 log, 50 + 1667 + 18 log 1667 = 18381 Mach
	=50lor, 50 + 1667 + 18 los 1667 - 18381
	3(1661150) = 5151
<i>C)</i>	PI = Thotel Do (40/el)
	Uling Souting
**	nBlocks(R) + nBlocks(R) * log_(nBlockR)
*	Uling Souting nBlocks(R) + nBlocks(R) * log_(nBlockR) 2 + 2 × log_2 2 = 4 leing hashing
	leing hashing
***	A hotel no is le cost remains same
	00 - ()
	P3: Theice (Loon)
	As frice is not be [nBlock (R) + nBlock R + log (nBlack) = 50 + 50 × log 50 = 350
	As fince is not le InBlock (R) + nBlock R + log (nBlake)
	Using Mashing
	SC Paice (Room) = 10000/50 = 200
	no=1 (we need block for & Price) nBlocks (Room) + nB = 51
	TIBROUS CROOM) + NIS = SI
	P.S: Tholeloo, leice (Room)
	luing scaring: 250
	3(05C) Ng = 330



	using hashing : Hotel tyle has 51, frice 10.51
Q	Townso, sityle, siferice Theromo, sityle, siferice
	Tucomno 5. romano, 91. Paricestos THOKLAS - hokl. No
	H More Selection Treom no - 5. reum Th. Hotel De- B Ofeciation Rown = Grage Thice 2000 B
	using Trumno, lyfe, leice Trumno, type, leice Mustelwo-holdno Mille Mille
	than Join Allying, Preconce or Projection Decorne Thololog
	Traice 7100 B OPRICE 7100 Tradelia
<u>\$</u>	If only left side of join is allowed to be something factions join, it torms left deep tree similarly if right side of join is allowed to form frevious join, it
	Both these trees are Called linear Algebra trees. Trees reither of these are Non linear Algebra to
N S	Lest Deep Right Deep A B Non Linear