

IndexStorageExample.sql

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1-- -----
2-- File name:   IndexStorageExample.sql
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4-- Date:       10/26/2017
5-- Class:      CS445
6-- Assignment: Class Example, Index & Storage Engines
7-- Purpose:    Create a small database; inspect how queries are
8--             solved.
9-- -----
10
11Drop table if exists Prof_Ex;
12Drop table if exists JobStatus;
13
14Create table JobStatus
15(
16     StatusID int AUTO_INCREMENT not null,
17     JobName varchar(25),
18     PayBonus int not null default 0,
19     Tenure boolean default FALSE,
20     CONSTRAINT JobStatus_PK Primary key(StatusID)
21) Engine = InnoDB;
22
23Create table Prof_Ex
24(
25     ProfID int not null AUTO_INCREMENT,
26     FName varchar(25),
27     LName varchar(50),
28     StatusID int not null,
29     StartDate date,
30     CONSTRAINT Prof_Ex_PK Primary key(ProfID),
31     Index Prof_EX_StartDate_IDX (StartDate),
32     CONSTRAINT Prof_Ex_StatusID_FK FOREIGN key (StatusID)
33     References JobStatus(StatusID)
34) Engine=InnoDB;
35
36INSERT INTO JobStatus (JobName, PayBonus, Tenure)
37     Values ("Professor", 10000, TRUE);
38INSERT INTO JobStatus (JobName, PayBonus, Tenure)
39     Values ("Associate", 1000, TRUE);
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40 INSERT INTO JobStatus (JobName, PayBonus, Tenure)
41     Values ("Assistant", 0, FALSE);
42
43 INSERT INTO Prof_Ex(FName, LName, StatusID, StartDate)
44     Values ("D", "R", 3, "1990-08-01");
45 INSERT INTO Prof_Ex(FName, LName, StatusID, StartDate)
46     Values ("S", "K", 3, "2002-08-01");
47 INSERT INTO Prof_Ex(FName, LName, StatusID, StartDate)
48     Values ("C", "W", 2, "2006-08-01");
49 INSERT INTO Prof_Ex(FName, LName, StatusID, StartDate)
50     Values ("C", "L", 2, "1999-08-01");
51
52 explain select * from Prof_Ex where ProfID=1; -- const
53
54 explain select * from Prof_Ex where StatusID=3; -- ref
55
56 explain select * from JobStatus Where PayBonus > 100; -- ALL
57
58 explain select * from Prof_Ex
59     where StartDate > "2001-01-01"; -- range
60
61 explain select * from Prof_Ex, JobStatus
62     where Prof_Ex.StatusID=JobStatus.StatusID; -- ALL, ALL
63 -- https://mariadb.com/kb/en/library/block-based-join-algorithms/
```