STAT_624_HW-04_Kaushik Manikonda

Source: Lecture Slides (STAT_624, Spring 2021)

Third Normal Form (3NF):

For a database to be 3NF: No non-key field is dependent on any other non-key field (e.g. "can I figure out any values of a row from any other value of that row?")

StudentName	StudentPhone	StudentDept	StudentDeptName	AdvisorName	AdvisorPhone	AdvisorDeptName	AdvisorDept	Term
Tolstoy	593-3824	21	English	Caplice	253-3233	ESD	7	Fall
Thoreau	644-2343	21	English	Caplice	253-3233	ESD	7	Fall
James	534-2534	21	English	Lapide	253-1111	ESD	7	Fall
Woolf	643-5436	18	Mathematics	Toomre	253-6322	Mathematics	18	Spring
Shakespeare	634-6344	8	Physics	Smith	253-8453	Physics	8	Spring
Pushkin	534-9832	7	Biology	Griffith	253-9833	Bio Engr	9	Spring

- We can figure out advisor phone from advisor name, and advisor department.
- We can figure out student department name from student department code.
- We can also figure out advisor department from the advisor's department code
- We may not be able to figure out the advisor's department from just the name, because of professors in different departments with similar names. So, we leave advisor department in the 3NF.
- Student phone number may not be readily available from student's name or other identifying information. So, we will leave student phone in the 3NF.

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StudentName	StudentPhone	StudentDept	AdvisorName	AdvisorDept	Term
Tolstoy	593-3824	21	Caplice	7	Fall
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StudentDept	StudentDeptNa
21	English
21	English
21	English
18	Mathematics
8	Physics
7	Biology

AdvisorName	AdvisorPhone	AdvisorDeptName	AdvisorDept
Caplice	253-3233	ESD	7
Caplice	253-3233	ESD	7
Lapide	253-1111	ESD	7
Toomre	253-6322	Mathematics	18
Smith	253-8453	Physics	8
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