TUGAS TEORI BASIS DATA

Pertemuan 8: NORMALISASI

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JURUSAN TEKNOLOGI

INFORMASI POLITEKNIK

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LATIHAN SOAL 1

Diketahui tabel berikut, buatlah langkah-langkah normalisasi, sehingga tabel menjadi normal !

NIP	Nama	Jabatan	Keahlian	Lama Kerja
156107	Rangga	Analis Senior	Java	6
			Oracle	1
156109	Maura	Analis Junior	Java	2
			C++	2
156120	Cinta	Programmer	Dbase	3
			Sybase	1
			Java	1

LATIHAN SOAL 2

• Diketahui tabel berikut yang menyimpan data pada suatu rental film. Buatlah langkah-langkah normalisasi, sehingga tabel menjadi normal !

FULL NAMES	PHYSICAL ADDRESS	MOVIES RENTED	SALUTATION
Janet Jones	First Street Plot No 4	Pirates of the Caribbean, Clash of the Titans	Ms.
Robert Phil	3rd Street 34	Forgetting Sarah Marshal, Daddy's Little Girls	Mr.
Robert Phil	5th Avenue	Clash of the Titans	Mr.

Jawaban!

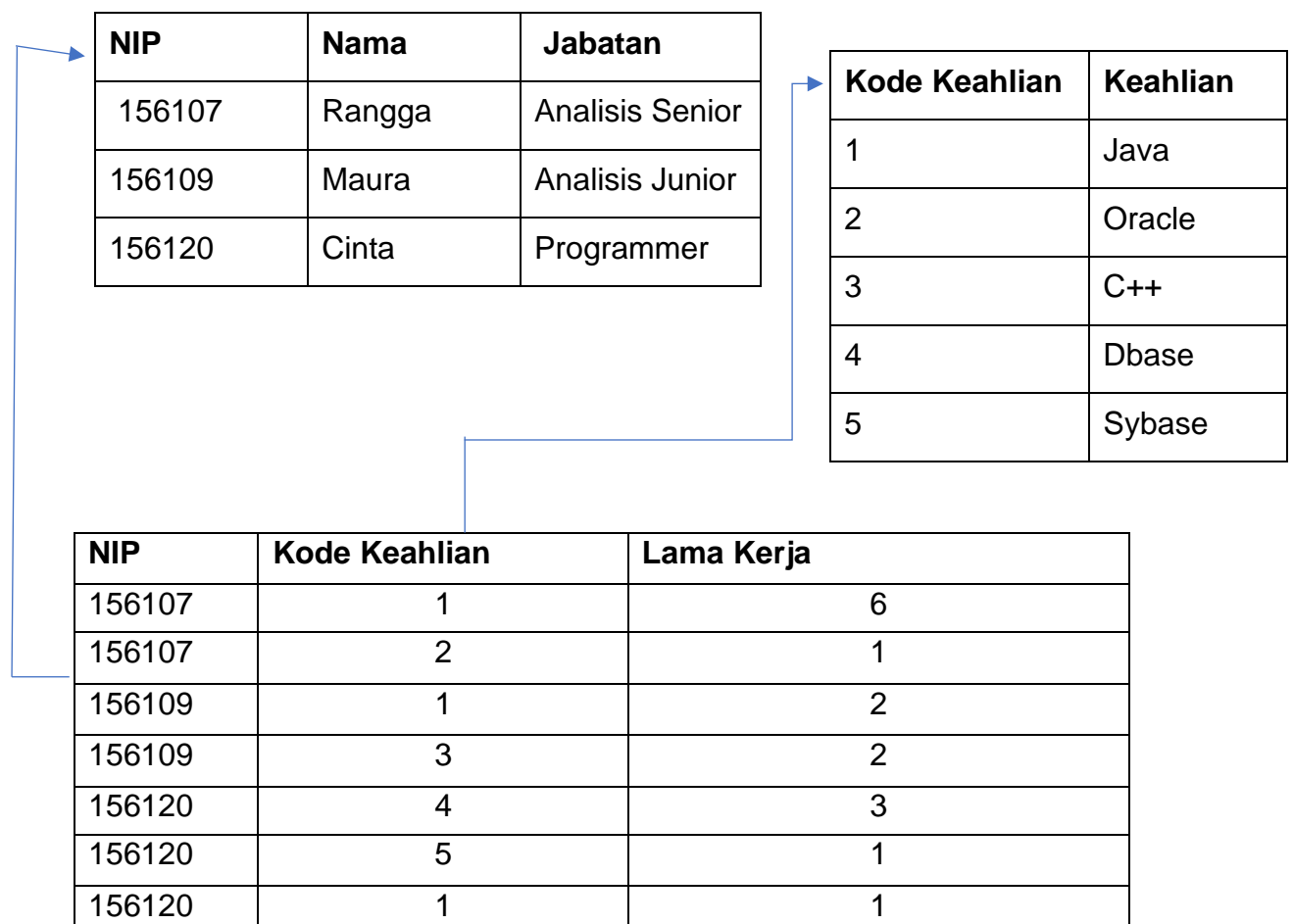1. Berikut jawaban dari Latihan nomer 1:

Normalization Form (1 NF)

NIP	Nama	Jabatan	Keahlian	Lama Kerja
156107	Rangga	Analisis Senior	Java	6
156107	Rangga	Analisis Senior	Oracle	1
156109	Maura	Analisis Junior	Java	2
156109	Maura	Analisis Junior	C++	2
156120	Cinta	Programmer	Dbase	3
156120	Cinta	Programmer	Sybase	1
156120	Cinta	Programmer	Java	1

Normalization Form (2 NF)

NIP	Nama	Jabatan
156107	Rangga	Analisis Senior
156109	Maura	Analisis Junior
156120	Cinta	Programmer

Kode Keahlian	Keahlian
1	Java
2	Oracle
3	C++
4	Dbase
5	Sybase

NIP	Kode Keahlian	Lama Kerja
156107	1	6
156107	2	1
156109	1	2
156109	3	2
156120	4	3
156120	5	1
156120	1	1

BCNF *Normalization Form (3 NF)*

Tabel sudah memenuhi kajian 3 NF
1. Tabel Karyawan = NIP →{nama , jabatan}
2. Tabel Keahlian = {NIP, Kode Keahlian} → Lama kerja
3. Tabel Kode Keahlian = Kode Keahlian → Keahlians

2. Berikut jawaban dari Latihan nomer 2:

Normalization Form (1 NF)

Full Names	Physical Address	Movies Oriented	Salutation
Janet Jones	First Street Plot No 4	Pirates of Caribbean	Ms
Janet Jones	First Street Plot No 4	Clash of The Titans	Ms
Robert Phil	3rd Street 34	Forgetting Sarah Marshal	Mr
Robert Phil	3rd Street 34	Daddy's Little Girl	Mr
Robert Phil	5th Avenue	Clash of The Titans	Mr

Normalization Form (2 NF)

Full Names	Physical Address	Salutation
Janet Jones	First Street Plot No 4	Ms
Janet Jones	First Street Plot No 4	Ms
Robert Phil	3rd Street 34	Mr
Robert Phil	3rd Street 34	Mr
Robert Phil	5th Avenue	Mr

Full Names	Movies Oriented
Janet Jones	Pirates of Caribbean
Janet Jones	Clash of The Titans
Robert Phil	Forgetting Sarah Marshal
Robert Phil	Daddy's Little Girl
Robert Phil	Clash of The Titans

Normalization Form (3 NF)

Termasuk BCNF dan salutation harus dipisah

Full Names	Physical Address
Janet Jones	First Street Plot No 4
Janet Jones	First Street Plot No 4
Robert Phil	3rd Street 34
Robert Phil	3rd Street 34
Robert Phil	5th Avenue

Full Names	Movies Oriented
Janet Jones	Pirates of Caribbean
Janet Jones	Clash of The Titans
Robert Phil	Forgetting Sarah Marshal
Robert Phil	Daddy's Little Girl
Robert Phil	Clash of The Titans

Full Names	Salutation
Janet Jones	Ms
Janet Jones	Ms
Robert Phil	Mr
Robert Phil	Mr
Robert Phil	Mr

Normalization Form (4 NF)

1) Tabel Salutation

Id_Salutation	Salutation
S001	Ms
S001	Ms
S002	Mr
S002	Mr
S002	Mr

2) Tabel User

Id_User	Full Names	Physical Address
U001	Janet Jones	First Street Plot No 4
U001	Janet Jones	First Street Plot No 4
U002	Janet Jones	3rd Street 34
U002	Janet Jones	3rd Street 34
U002	Janet Jones	5th Avenue

3) Tabel Relasi antara Salutation dan User

Id_Salutation	Id_User
S001	U001
S001	U001
S002	U002
S002	U002
S002	U002

4) Tabel Movie

Id_Movie	Movies Oriented
M001	Pirates of Caribbean
M002	Clash of The Titans
M003	Forgetting Sarah Marshal
M004	Daddy's Little Girl
M002	Clash of The Titans

5) Tabel Relasi antara User dan Movie

Id_User	Id_Movie
U001	M001
U001	M002
U002	M003
U002	M004
U002	M002