# TUGAS TEORI BASIS DATA

# Pertemuan 8: NORMALISASI

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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 !

# 

# Jawaban!

# 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

1. 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 |

1. 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 |

1. Tabel Relasi antara Salutation dan User

|  |  |
| --- | --- |
| **Id\_Salutation** | **Id\_User** |
| S001 | U001 |
| S001 | U001 |
| S002 | U002 |
| S002 | U002 |
| S002 | U002 |

1. 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 |

1. Tabel Relasi antara User dan Movie

|  |  |
| --- | --- |
| **Id\_User** | **Id\_Movie** |
| U001 | M001 |
| U001 | M002 |
| U002 | M003 |
| U002 | M004 |
| U002 | M002 |