**Lab 6 – Normalization**

The given table of data is at 1NF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| staffNo | denstistName | patNo | patName | appointment | | surgeryNo |
| date | time |
| S1011 | Tony Smith | P100 | Gilian White | 12-Sep-13 | 10.00 | S15 |
| S1011 | Tony Smith | P105 | Jill Bell | 12-Sep-13 | 12.00 | S15 |
| S1024 | Helen Pearson | P108 | Ian McKay | 12-Sep-13 | 10.00 | S10 |
| S1024 | Helen Pearson | P108 | Ian McKay | 14-Sep-13 | 14.00 | S10 |
| S1032 | Robin Plevin | P105 | Jill Bell | 14-Sep-13 | 16.30 | S15 |
| S1032 | Robin Plevin | P110 | John Walker | 15-Sep-13 | 18.00 | S13 |

We consider the staffNo and appointmentDateTime as a combined primary key which do not have a chance of repetition.

Since dentistName is partially dependent to the primary key, we make a separate table for dentist and keep the rest in another table. This is 2NF.

dentistTable

|  |  |
| --- | --- |
| staffNo | denstistName |
|  |
| S1011 | Tony Smith |  |
| S1024 | Helen Pearson |  |
| S1032 | Robin Plevin |  |

The patientName is not directly dependent to the primary key but are transitive dependent, we make a separate table for patient. This is 3NF

patientTable

|  |  |
| --- | --- |
| patNo | patName |
|  |
| P100 | Gilian White |  |
| P105 | Jill Bell |  |
| P108 | Ian McKay |  |
| P110 | John Walker |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| staffNo | patNo | appointment | | surgeryNo |
| date | time |
| S1011 | P100 | 12-Sep-13 | 10.00 | S15 |
| S1011 | P105 | 12-Sep-13 | 12.00 | S15 |
| S1024 | P108 | 12-Sep-13 | 10.00 | S10 |
| S1024 | P108 | 14-Sep-13 | 14.00 | S10 |
| S1032 | P105 | 14-Sep-13 | 16.30 | S15 |
| S1032 | P110 | 15-Sep-13 | 18.00 | S13 |