**Report on the Hospital Database**

**Overview of the tool used:**

* The tool used for the analysis of the hospital database is MySQL Workbench which allows the users to interact with MySQL databases.
* It is useful for users to design, develop and manage MySQL databases.
* Key features of MySQL workbench are Database Design, Data Modelling, Database Administration, Data Migration, Data Visualization, and Visual Query Builder.
* It also provides an SQL editor to write and execute SQL queries, including data manipulation language statements such as SELECT, INSERT, UPDATE, and DELETE, and data definition languages such as CREATE, ALTER, and DROP.

**Sample Records of the database:**

* There are 2 tables, namely Hospital and Doctor. The fields in Hospitals are hospital\_id, hospital\_name, bed\_count, and the fields in the doctor’s table are doctor\_id, doctor\_name, hospital\_id, joining\_date, specialty, salary, and experience.
* The records inserted into the **hospital** are as follows,

|  |  |  |
| --- | --- | --- |
| hospital\_id | hospital\_name | bed\_count |
| 1 | St Mary | 300 |
| 2 | St Teresa | 100 |
| 3 | Columbia | 50 |
| 4 | St Lukes | 150 |
| 5 | Middlesex Hospital | 250 |
| 6 | Priority Hospital | 350 |
| 7 | Royal London | 500 |
| 8 | St Ann | 400 |
| 9 | Gordon | 100 |
| 10 | Mallya | 900 |
| 11 | St Pancras | 55 |
| 12 | Indira Gandhi | 230 |
| 13 | Nightingale | 120 |
| 14 | St Peter | 600 |
| 15 | King George | 310 |
| 16 | claybury | 1000 |
| 17 | Wellington | 430 |
| 18 | St Leonard | 100 |
| 19 | Mile end | 250 |
| 20 | Oldchurch | 700 |
| 21 | Queens | 400 |
| 22 | Hammersmith | 520 |
| 23 | Fulham | 120 |
| 24 | Friern | 150 |
| 25 | St Mark | 300 |
| 26 | Bromley | 130 |
| 27 | Guys | 500 |
| 28 | Lambeth | 420 |
| 29 | London Bridge | 600 |
| 30 | Maudsley | 800 |
| 31 | Priory | 50 |
| 32 | Queen Mary | 700 |
| 33 | St Thomas | 800 |
| 34 | St Alfege | 570 |
| 35 | Barnes | 570 |
|  |  |  |

Similarly, the records of the **doctor** table are as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| doctor\_id | doctor\_name | hospital\_id | joining\_date | specialty | salary | experience |
| 101 | John Doe | 1 | 4/1/2022 | Cardiology | 5000 | NULL |
| 102 | Jane Smith | 2 | 3/1/2021 | Pediatrics | 4500 | NULL |
| 103 | Michael Johnson | 3 | 4/1/2020 | Orthopaedics | 6000 | NULL |
| 104 | Sarah Davis | 4 | 3/10/2021 | Internal Medicine | 5500 | NULL |
| 105 | Robert Wilson | 5 | 2/11/2019 | Dermatology | 5200 | NULL |
| 106 | Emily Thomson | 6 | 1/1/2020 | Neurology | 5800 | NULL |
| 107 | David Anderson | 7 | 8/11/2021 | Ophthalmology | 5300 | NULL |
| 108 | Jennifer lee | 8 | 4/1/2023 | Gastrornterology | 5400 | NULL |
| 109 | Mathew Turner | 9 | 1/8/2021 | Psychiatry | 5600 | NULL |
| 110 | Olivia | 10 | 6/23/2017 | Family Medicine | 5900 | NULL |
| 111 | William Garcia | 11 | 9/21/2018 | Emergency Medicine | 5100 | NULL |
| 112 | Sophia Martinez | 12 | 5/18/2016 | Obstetrics and Gynecology | 5700 | NULL |
| 113 | Michael Brown | 13 | 5/6/2023 | Orthopedics | 5000 | NULL |
| 114 | Prajwal | 14 | 3/2/2021 | Allergy and Immunology | 6300 | NULL |
| 115 | Aashu | 15 | 6/8/2020 | Anesthesiology | 5900 | NULL |
| 116 | Saurabh | 16 | 2/20/2016 | Colon and Rectal Surgeon | 6200 | NULL |
| 117 | Rohith | 17 | 10/1/2019 | General Surgery | 5400 | NULL |
| 118 | Nikhil | 18 | 9/1/2018 | ENT | 5600 | NULL |
| 119 | Rajini | 19 | 3/2/2014 | Forensic Pathology | 6800 | NULL |
| 120 | Sridhar | 20 | 1/1/2021 | Genetics and Genomics | 4500 | 2 |
| 121 | Alisha | 21 | 3/16/2020 | Pediatric Surgery | 4600 | NULL |
| 122 | Venky | 22 | 7/10/2017 | Hospice and Palliative medicine | 3900 | NULL |
| 123 | ABC | 23 | 2/4/2013 | Hospital Medicine | 5400 | NULL |
| 124 | Shiv | 24 | 1/3/2016 | Internal Medicine | 3400 | NULL |
| 125 | Vish | 25 | 3/1/2019 | Obstetrics and Gynacology | 2900 | NULL |
| 126 | Vicky | 26 | 6/1/2021 | Opthalmic Surgery | 6900 | NULL |
| 127 | Vikram | 27 | 1/3/2018 | Otolaryngology | 5000 | NULL |
| 128 | Appu | 28 | 6/3/2019 | Pathology | 5200 | NULL |
| 129 | VS | 29 | 4/1/2022 | Pediatrics | 4300 | NULL |
| 130 | John Doe | 30 | 2/27/2014 | Plastic Surgery | 6200 | NULL |
| 131 | Golu | 31 | 7/1/2017 | Homeopathy | 4300 | NULL |
| 132 | CHeedu | 32 | 5/1/2015 | Preventive Medicine | 5100 | NULL |
| 133 | Labu | 33 | 3/2/2016 | Psychiatry | 3200 | NULL |
| 134 | Benne | 34 | 4/1/2011 | Radiology | 3200 | NULL |
| 135 | Potato | 35 | 6/12/2018 | Rheumatology | 3100 | NULL |

**Queries Performed on both tables:**

* SELECT \* FROM HOSPITAL: This query retrieves all the records from the table and the output is a table as depicted above.
* SELECT \* FROM DOCTOR: Just like the above query, this statement retrieves all the records from the doctor table.
* SELECT SPECIALTY, SALARY FROM DOCTOR: This statement retrieves the column specialty and salary from the doctor table. The output is depicted below.

|  |  |
| --- | --- |
| Allergy and Immunology | 6300.00 |
| Anesthesiology | 5900.00 |
| Cardiology | 5000.00 |
| Colon and Rectal Surgeon | 6200.00 |
| Dermatology | 5200.00 |
| Emergency Medicine | 5100.00 |
| ENT | 5600.00 |
| Family Medicine | 5900.00 |
| Forensic Pathology | 6800.00 |
| Gastrornterology | 5400.00 |
| General Surgery | 5400.00 |
| Genetics and Genomics | 4500.00 |
| Homeopathy | 4300.00 |
| Hospice and Palliative medicine | 3900.00 |
| Hospital Medicine | 5400.00 |
| Internal Medicine | 5500.00 |
| Internal Medicine | 3400.00 |
| Neurology | 5800.00 |
| Obstetrics and Gynacology | 2900.00 |
| Obstetrics and Gynecology | 5700.00 |
| Opthalmic Surgery | 6900.00 |
| Opthalmolgy | 5300.00 |
| Orthopaedics | 6000.00 |
| Orthopedics | 5000.00 |
| Otolaryngology | 5000.00 |
| Pathology | 5200.00 |
| Pediatric Surgery | 4600.00 |
| Pediatrics | 4500.00 |
| Pediatrics | 4300.00 |
| Plastic Surgery | 6200.00 |
| Preventive Medicine | 5100.00 |
| Psychiatry | 5600.00 |
| Psychiatry | 3200.00 |
| Radiology | 3200.00 |
| Rheumatology | 3100.00 |

* SELECT \* FROM DOCTOR WHERE hospital\_id = 20: This particular query retrieves the record from the row where the hospital\_id is 20. This query retrieves all the records such as doctor\_id, doctor\_name, specialty, and experience where the id of the hospital is 20.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 120 | Sridhar | 20 | 2021-01-01 | Genetics and Genomics | 4500.00 | 2 |

* UPDATE DOCTOR SET EXPERIENCE = 2 WHERE DOCTOR\_ID = 120: This query is used to update the table using a where clause. In the doctor table, we can see that the experience has the value NULL and hence to update any one field the above query can be used. In the below result, we can see that the experience column which is the last column has been updated with 2 years.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 120 | Sridhar | 20 | 2021-01-01 | Genetics and Genomics | 4500.00 | 2 |