**ASSIGNMENT # 02**

**DATABASE SYSTEM (CS-329)**

**SUBMITTED BY**

**MUNIB-UL-HASSAN**

**ROLL NO #**

**CS19-037**

****

**SUBMITTED TO**

**SIR ANAD**

**DEPARTMENT OF COMPUTER SCIENCE**

**SIR SYED UNIVERSITY OF ENGINEERING AND TECHNIOLOGY**

**Question No 01:**

**1NF:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| P. | P. | P. | P. | E. | E. | D. | D. | Hourly |
| Code | Name | Manager | Budget | No | Name | No | Name | Rate |
| Pc010 | R.S | Ajay | 120500 | S100 | Mohan | D03 | Database | 21.00 |
| Pc010 | R.S | Ajay | 120500 | S101 | Vipal | D02 | Testing | 16.50 |
| Pc010 | R.S | Ajay | 120500 | S102 | Riyaz | D01 | IT | 22.00 |
| Pc011 | Hr | Charu | 500500 | S103 | Pavan | D03 | Database | 18.50 |
| Pc011 | Hr | Charu | 500500 | S104 | Jitendra | D02 | Testing | 17.00 |
| Pc011 | Hr | Charu | 500500 | S315 | Pooja | D01 | IT | 23.50 |
| Pc012 | As | Rajesh | 710700 | S317 | Rahul | D03 | Database | 21.50 |
| Pc012 | As | Rajesh | 710700 | S218 | Avenash | D02 | Testing | 15.50 |
| Pc012 | As | Rajesh | 710700 | S109 | Vikas | D01 | IT | 20.20 |

**2NF:**

|  |  |  |  |
| --- | --- | --- | --- |
| P.Code | P.Name | P.Manager | P.Budget |
| PC010 | R.S | Ajay | 120500 |
| PC011 | HR | Charu | 500500 |
| PC012 | AS | Rajesh | 710700 |

|  |  |  |
| --- | --- | --- |
| P.Code | E.No | Hourly Rate |
| PC010 | S100 | 21.00 |
| PC010 | S101 | 16.50 |
| PC010 | S102 | 22.00 |
| PC011 | S103 | 18.50 |
| PC011 | S104 | 17.00 |
| PC011 | S315 | 23.50 |
| PC012 | S317 | 21.50 |
| PC012 | S218 | 15.50 |
| PC012 | S109 | 20.20 |

**Question No 02:**

The Table Is in 1nf.

**Now**, **2NF:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Unit\_Id | Date | Topic | Room | Book | Tutor\_Id |
| U1 | 23-2-3 | GMT | 629 | Deumich | Tut 1 |
| U2 | 18-11-2 | GIN | 631 | Zehnder | Tut 2 |
| U5 | 5-5-3 | PHF | 632 | Dumlers | Tut 3 |
| U4 | 4-7-3 | AVD | 621 | SwissTopo | Tut 4 |

|  |  |  |
| --- | --- | --- |
| Unit\_Id | Student\_Id | Grade |
| U1 | St 1 | 4.7 |
| U2 | St 1 | 5.1 |
| U1 | St 4 | 4.3 |
| U5 | St 2 | 4.9 |
| U4 | St 2 | 5.0 |

|  |  |
| --- | --- |
| Tutor\_Id | Tutor Email |
| Tut 1 | Tut 1@Fbb.Ch |
| Tut 3 | Tut 3@Fbb.Ch |
| Tut 5 | Tut 5@Fbb.Ch |

**Normalized.**

|  |  |  |  |
| --- | --- | --- | --- |
| E.No | E.Name | D.No | D.Name |
| S100 | Mohan | D03 | Database |
| S101 | Vipal | D02 | Testing |
| S102 | Riyaz | D01 | IT |
| S103 | Pavan | D03 | Database |
| S104 | Jitendra | D02 | Testing |
| S315 | Pooja | D01 | IT |
| S317 | Rahul | D03 | Database |
| S218 | Avenash | D02 | Testing |
| S109 | Vikas | D01 | IT |

**3NF:**

|  |  |  |
| --- | --- | --- |
| E.No | E.Name | D.No |
| S100 | Mohan | D03 |
| S101 | Vipal | D02 |
| S102 | Riyaz | D01 |
| S103 | Pavan | D03 |
| S104 | Jitendra | D02 |
| S315 | Pooja | D01 |
| S317 | Rahul | D03 |
| S218 | Avenash | D02 |
| S109 | Vikas | D01 |

|  |  |
| --- | --- |
| D.No | D.Name |
| D01 | IT |
| D02 | Testing |
| D03 | Database |

**The Table Is Normalized.**

**Question No 03:**

The Table Is in 1nf.

**Now**, **2nf:**

|  |  |  |  |
| --- | --- | --- | --- |
| Score\_Id | Student | Marks | Subject |
|  | Id |  | Id |
| 1 | 10 | 70 | 1 |
| 2 | 10 | 75 | 2 |
| 3 | 11 | 80 | 1 |

|  |  |
| --- | --- |
| Subject\_Id | Teacher |
| 1 | Java Teacher |
| 2 | C++ Teacher |

**The Table Is Normalized.**