|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Player Name** | **Player State** | **Player**  **Number** | **Player Team** | **Team Coach** | **Game Against** | **Game Date** | **Player Runs** |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel | Pakistan | 2003-03-12 | 95 |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel | Pakistan | 2003-03-25 | 22 |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel | England | 2003-03-29 | 88 |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan | S. Africa | 2003-03-10 | 42 |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan | S. Africa | 2003-03-11 | 61 |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan | New Zealand | 2003-03-12 | 62 |

Q2. Using your knowledge of cricket and from the instance, identify the functional dependencies for this relation.

**Player Name, Player State, Player Number, Player Team, Team Coach => Game Against, Game Date, Player Runs**

Q3. Is the table you created in question 1 also in 2NF? If not decompose the relation into ones that are in 2NF.

**Table 1:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Player Name** | **Player State** | **Player**  **Number** | **Player Team** | **Team Coach** |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel |
| Sachin Tendulkar | Maharashtra | 11 | India | Greg Chappel |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan |
| Adam Gilchrist | Western Australia | 34 | Australia | John Buchanan |

**Table 2:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Player**  **Number** | **Game Against** | **Game Date** | **Player Runs** |
| 11 | Pakistan | 2003-03-12 | 95 |
| 11 | Pakistan | 2003-03-25 | 22 |
| 11 | England | 2003-03-29 | 88 |
| 34 | S. Africa | 2003-03-10 | 42 |
| 34 | S. Africa | 2003-03-11 | 61 |
| 34 | New Zealand | 2003-03-12 | 62 |

Q3. Is/Are the table(s) you created in question 3 also in 3NF? If not decompose into 3NF.

Table 1:

|  |  |  |
| --- | --- | --- |
| **Player**  **Number** | **Player State** | **Player Team** |
| **11** | Maharashtra | India |
| **34** | Western Australia | Australia |

**Table 2:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Player**  **Number** | **Player**  **Name** | **Team Coach** | **Game Against** | **Game Date** | **Player Runs** |
| **11** | Sachin Tendulkar | Greg Chappel | Pakistan | 2003-03-12 | 95 |
| **11** | Sachin Tendulkar | Greg Chappel | Pakistan | 2003-03-25 | 22 |
| **11** | Sachin Tendulkar | Greg Chappel | England | 2003-03-29 | 88 |
| **34** | Adam Gilchrist | John Buchanan | S. Africa | 2003-03-10 | 42 |
| **34** | Adam Gilchrist | John Buchanan | S. Africa | 2003-03-11 | 61 |
| **34** | Adam Gilchrist | John Buchanan | New Zealand | 2003-03-12 | 62 |