Topic: Sports

1. The goal of the project is to divide the data of T20 World Cup 2024 into six tables: Player Summary, List of Players, Total Runs of Players, Best Bowling, Best Batting, and T20 2024 Summary. The database must be properly prepared. Relevant data including player squads, match results, performance records, and batting and bowling highlights will be included in the database. This system will simplify the management and analysis of the tournament data for easier availability, tracking, and insights. This organized data enables in-depth performance analysis, easy monitoring of top performers, and informs reporting tools and dashboards. It is beneficial to fans, analysts, and broadcasters, and paves the way for predictive models and performance comparison among players and teams throughout the tournament.

T20 World Cup 2024 database is to provide and keep track of complete, well-organized information for all the major competition areas. To dissect raw performance data into well-specified categories which may be queried, analyzed, and visualized is the general intention. It presents data in coherent hierarchies like players, games, and spotlights facilitating meaningful statistical inference over sources not structured.

* Match-level information, including teams, dates, grounds, winners, and winning margins.
* Information from the player list, including name, team, date of birth, batting and bowling type.
* Overall performance statistics, including averages, boundaries, wickets, runs, strike rate, and number of matches played.
* Best individual performances (e.g., best bowling figures, best batting scores) per match.
* Player summaries that combine bowling and batting influence.

Uses:

This database proves useful when organizing and comparing key information of the T20 World Cup 2024, including match reports, player records, and finest performances. This provides instant access to information like total runs, finest batting and bowling, and individual player reports. This benefits fans, analysts, and broadcasters in tracking performance trends, creating insights, and producing engaging content. It also enables data visualization, relative performance, and extendibility for real-time update and predictive analysis through the tournament.

* Easy access to meaningful information, such as match summaries, team performance, and player performances.
* Players' and teams' performance histories.
* comparisons of the top performers based on measures such as strike rates, economy rates, and batting averages.
* Match-by-match analysis of performance, allowing post-match analysis and storytelling.
* Predictive modeling is the process of applying stored data to algorithms that grade players or forecast outcomes.
* Real-time visualizations of trends are possible with interactive dashboards for analysts, broadcasters, and fans.
* Scalability in the future, to make seamless integration of historical data, real-time streams of matches, and fantasy league modules.

1. Table 1:

T20\_2024\_Summary:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Team\_1 | VARCHAR | 50 | NOT NULL |  | No | First team playing the match |
| Team\_2 | VARCHAR | 50 | NOT NULL |  | No | Second team playing the match |
| Winner | VARCHAR | 50 | NOT NULL |  | No | Match winner |
| Margin | VARCHAR | 20 | NOT NULL |  | No | Win margin |
| Ground | VARCHAR | 50 | NOT NULL |  | No | Match venue |
| Match\_Date | |  | | --- | |  |  |  | | --- | | DATE | |  | NOT NULL |  | No | Date of the match |
| Match\_ID | INT |  | NOT NULL | UNIQUE, PRIMARY KEY | Yes | Unique identifier for the match |

Table 2:

List\_of\_Players:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Player | VARCHAR | 100 | NOT NULL | UNIQUE | Yes | Name of the player |
| Birth\_date | DATE |  | NOT NULL |  | No | Player's date of birth |
| Team | VARCHAR | 50 | NOT NULL | UNIQUE | No | Team player belongs to |
| Batting\_style | VARCHAR | 50 | NOT NULL |  | No | Player's batting style |
| Bowling\_style | VARCHAR | 50 | NULL |  | NO | Player's bowling style |

Table 3:

Total\_Run\_of\_the\_Players:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Player | VARCHAR | 100 | NOT NULL | UNIQUE | Yes | Player's name |
| Team | VARCHAR | 50 | NOT NULL | UNIQUE | No | Player's team |
| Mat | INT |  | NOT NULL |  | No | Matches played |
| Inns | INT |  | NOT NULL | CHECK (Innings >= 0) | No | Innings played |
| NO | INT |  | NOT NULL |  | No | Not outs |
| Runs | INT |  | NOT NULL |  | No | Total runs scored |
| HS | VARCHAR | 10 | NOT NULL |  | No | Highest score |
| Ave | FLOAT |  | NOT NULL |  | No | Batting average |
| BF | INT |  | NOT NULL |  | No | Balls faced |
| SR | FLOAT |  | NOT NULL |  | No | Strike rate |
| 100 | INT |  | NOT NULL |  | No | Centuries scored |
| 50 | INT |  | NOT NULL |  | No | Fifties scored |
| 4s | INT |  | NOT NULL |  | No | Ducks (0 runs) |
| 6s | INT |  | NOT NULL |  | No | Number of 4s hit |

Table 4:

Best\_Bowling:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Player | VARCHAR | 100 | NOT NULL | UNIQUE | Yes | Bowler's name |
| Team | VARCHAR | 50 | NOT NULL | UNIQUE | No | Team name |
| Mat | INT |  | NOT NULL |  | No | Matches played |
| Inns | INT |  | NOT NULL |  | No | Innings played |
| Balls | INT |  | NOT NULL |  | No | Total balls bowled |
| Overs | FLOAT |  | NOT NULL |  | No | Total overs bowled |
| Mdns | INT |  | NOT NULL |  | No | Maidens bowled |
| Runs | INT |  | NOT NULL |  | No | Runs conceded |
| Wkts | INT |  | NOT NULL | CHECK (Wickets >= 0) | No | Wickets taken |
| BBI | DATE |  | NOT NULL |  |  | Best bowling in an innings |
| Ave | FLOAT |  | NOT NULL |  | No | Bowling average |
| Econ | FLOAT |  | NOT NULL |  | No | Economy rate |
| SR | FLOAT |  | NOT NULL |  | No | Strike rate |
| 4 | INT |  | NOT NULL |  | No | 4-wicket hauls |
| 5 | INT |  | NOT NULL |  | No | 5-wicket hauls |

Table 5:

Best\_Batting:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Player | VARCHAR | 100 | NOT NULL | UNIQUE | Yes | Name of the batter |
| Runs | VARCHAR | 10 | NOT NULL | CHECK (Runs >= 0) | No | Runs scored |
| Mins | INT |  | NOT NULL |  | No | Minutes batted |
| Balls | INT |  | NOT NULL |  | No | Balls faced |
| 4s | INT |  | NOT NULL |  | No | Number of 4s |
| 6s | INT |  | NOT NULL |  | No | Number of 6s |
| SR | FLOAT |  | NOT NULL |  | No | Strike rate |
| Team | VARCHAR | 50 | NOT NULL | UNIQUE | No | Player's team |
| Opposition | VARCHAR | 50 | NOT NULL |  | No | Opposing team |
| Ground | VARCHAR | 50 | NOT NULL |  | No | Venue |
| Match\_Date | DATE |  | NOT NULL |  | No | Date of the match |

Table 6:

Player\_Summary:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Data Type | Size | Null / NOT Null | Constraint | PK | Purpose of the column |
| Player | VARCHAR | 100 | NOT NULL | UNIQUE | Yes | Player name |
| Team | VARCHAR | 50 | NOT NULL | UNIQUE | No | Player's team |
| Batting\_style | VARCHAR | 50 | NOT NULL |  | No | Batting style |
| Bowling\_style | VARCHAR | 50 | NULL |  | No | Bowling style |
| Runs | VARCHAR | 10 | NULL |  | No | Total runs |
| Batting\_Avg | VARCHAR | 10 | NULL |  | No | Batting average |
| Batting\_SR | VARCHAR | 10 | NULL |  | No | Batting strike rate |
| Wickets | VARCHAR | 10 | NULL |  | No | Total wickets |
| Bowling\_Avg | VARCHAR | 10 | NULL |  | No | Bowling average |
| Economy | VARCHAR | 10 | NULL |  | No | Bowling economy |
| Bowling\_SR | VARCHAR | 10 | NULL |  | No | Bowling strike rate |