T20 World Cup 2024 — Power BI Project: Step-by-step

1. **Project overview** — Describe the dashboard purpose: explore match results, team performance, top scorers, bowlers, and tournament trends using T20 World Cup 2024 match-level data.

2. **Files & inputs** — List raw files included (matches.csv, players.csv, deliveries.csv, team_stats.csv, and the uploaded .pbix). Note expected columns: Date, Team, Opponent, Venue, Runs, Wickets, Player, Role, Overs, Result.

3. **Set up workspace** — Open Power BI Desktop, create a new report, and connect to the raw data sources (CSV/Excel/JSON). Confirm data encoding and regional settings (dates in dd/mm/yyyy or yyyy-mm-dd).

4. **Data import & schema check** — Import each table and inspect columns. Convert types (Date, Text, Whole Number, Decimal) and trim whitespace. Remove blank rows and obvious duplicates.

5. **Data cleaning & transformation (Power Query)** —

6. Normalize team names (India vs. IND) with a mapping table.
7. Split venue into City and Stadium if combined.
8. Create a single Date column from separate Day/Month/Year if needed.

9. Fill missing numeric values with 0 or use domain-appropriate defaults.

10. **Create dimension tables** — Build clean dimension tables: Teams, Players, Venues, Tournaments, and Dates (Date dimension with Year, Month, Quarter, Weekday).

11. **Build fact tables** — Create facts: Matches (one row per match), Deliveries/Events (ball-by-ball if available), and PlayerPerformance (aggregated per match). Ensure each fact has foreign keys to dimension tables.

12. **Model relationships** — In the Model view, connect Facts to Dimensions using one-to-many relationships. Set Date table as the official Date table and mark as Date table.

13. **Create calculated columns & DAX measures** —

14. KPIs: Total Matches, Wins, Losses, Win %.
15. Aggregate metrics: Total Runs, Average Score, Total Wickets.
16. Player metrics: Top Run Scorer, Top Wicket Taker, Strike Rate, Economy.

17. Time intelligence: YTD runs, Last 5 matches form, Rolling 3-match average.

18. **Design visuals — layout and wireframe** — Sketch the report layout: header with title and filters, left pane for team KPIs, center pane with main visuals (bar chart, line chart), right pane with detailed tables and top players, bottom with match list and tooltip page.

19. **Create core visuals** — Implement visuals:

20. Bar chart: Team total runs or wins.
21. Line chart: Team score trend over tournament.
22. Matrix / Table: Match-level details.
23. Card visuals: KPIs (Avg score, Total matches).
24. Scatter or bubble: Strike rate vs average for batters.

25. Slicer pane: Team, Venue, Date Range, Tournament Stage.

26. **Advanced interactivity** — Add drillthrough pages (team or player level), bookmarks for pre-set views (Team comparison, Match list), and sync slicers across pages.

27. **Custom tooltip & report page tooltip** — Build a tooltip page for match hover showing key match summary (top scorer, best bowler, margin of victory).

28. **Conditional formatting & accessibility** — Use color rules for win/loss, data labels on key visuals, and alt text for visuals. Ensure fonts and contrast meet readability.

29. **Performance optimizations** — Reduce loaded columns, disable Auto Date/Time if not needed, aggregate heavy tables, and use query folding in Power Query. Consider composite model or incremental refresh for large ball-by-ball data.

30. **Theme, branding & final polish** — Apply a consistent color palette (team colors), company/project logo, and consistent font sizes. Align visuals, set page size to 16:9, and tidy tooltips.

31. **Testing & validation** — Cross-check KPIs against raw data (spot checks). Validate top scorers, totals, and date filters. Test interactivity: drillthroughs, bookmarks, and slicer sync.

32. **Documentation & README** — Add a README page inside the report or an external README.md explaining data sources, refresh instructions, DAX summary, and known limitations.

33. **Publish & share** — Publish to Power BI Service, create app workspace, set dataset credentials/ gateway, schedule refresh, and share the app/dashboard link with stakeholders. Configure row-level security (RLS) if needed.

34. **Next steps & enhancements** — Suggest enhancements: predictive match outcome model, player comparison tool, mobile-optimized layout, or Power Automate alerts for new match results.

Notes: Keep each step reproducible — include sample queries or DAX snippets in a separate developer notes section. If you want, I can expand any step into commands, Power Query M, or specific DAX formulas.