

The following is a checklist of steps for your project development:

PHASE 1: DESIGN

1. Choose the data source you want to analyse. This must allow you produce, in the end, the number of dimensions, measures and hierarchies required by the project specifications and a set of interesting analyses
2. If the data source is a single csv or excel file, carry out a re-engineering step to compose a database schema (E/R or Relational model) fitting the data. This is important to both well understand the data and give it a structure. Let's call it the "**schema of the reconciled database**"
3. Build the schema for the reconciled database on a DBMS of your choice. Let's call it the "**reconciled database**"
4. Conceptual design of your Fact schema:
 - a. Choose the fact from the reconciled database
 - b. Build the attribute tree and follow all the steps to obtain a **DFM Schema**
5. Logical design:
 - a. Translate the DFM Schema in a **Star schema**
 - b. Build the schema of the star schema on the DBMS of your choice. Let's call it the "**data warehouse**" for simplicity

PHASE 2: DATA MANAGEMENT

1. Populate the reconciled database from the csv file or excel (if any)
2. Design and implement your data cleaning. You can use any tool of your choice for this step. You can carry out this step either on the reconciled database or on the original csv/excel before populating the database (note that different considerations must be carried out in the two cases)
3. Design the ETL process from the reconciled database to the data warehouse. You can use Pentaho or any other tool of your choice for this step

PHASE 3: DATA VISUALIZATION

1. Think about the story you want to tell about your data...
2. Build your analysis charts with Tableau (Sheets and Dashboards; Stories are optional)
3. Remember that you must allow a dynamic analysis (OLAP), so avoid having only static charts (you should allow applying roll-up, drill-down, slice and dice, ecc. when this makes sense)
4. Prepare your short essay to present the project at the exam.