Task1: Beauty Pageant Ranking Dashboard

This is an elaborate document to create a pivot table to calculate and show the weighted scores, rankings quickly and accurately. Objective of task 1 is to achieve below output using power query and power pivot.

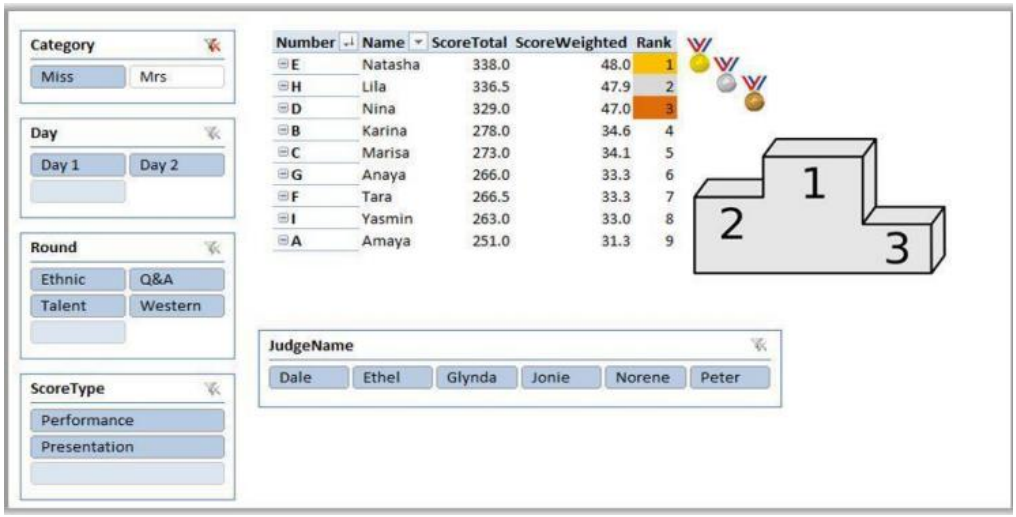
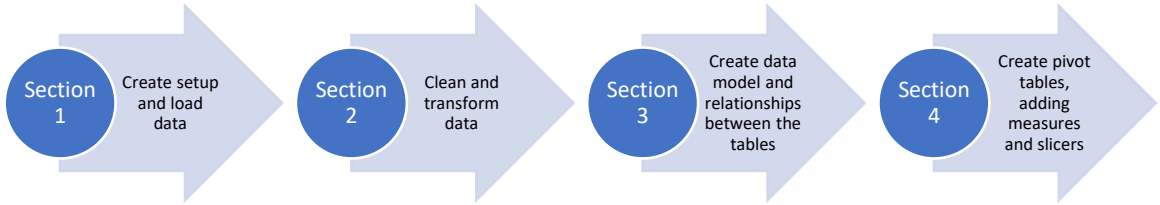


Fig 1 Desired output

Task 1 is divided into following sub-tasks.



Let's discuss them in detail now.

Section 1

<u>Create setup and load data</u>

1. Open MS Excel on your system (preferably on the latest version).
2. Go to *Data tab* and *Launch power query* editor from *Get Data* option (top-leftmost option). A new window will open.
3. Download *beauty_pageant_score_data.xlsx* on your local directory and load it in power query editor by choosing this file from *New Source* option.
4. From beauty_pageant_score_data.xlsx, check the *select multiple items* option and choose to load files Judges1, Judges2, Judges3, Judges4, Judges5, Judges6.

Section 2

Clean and transform data

1. In the loaded files, we observe that the table headers are uneven. We fix these by choosing *Use First Row as Headers* from the *Transform* tab, on each file.
2. Since the headers are even now, we can append tables Judge1-Judge6. Using the *Append Queries as New* from *Appending Queries* option (from *Combine* section), transfer tables from *Available tables* to *Tables to append* pane. A new table will be created. Rename that table *scoring*
3. Next, we drop the names column because of redundancy. Now we need to unpivot the score columns for easy readability. We do this by selecting score columns and *choosing Unpivot only selected columns* from *Transform tab -> Unpivot columns*.
4. From *Home* tab choose *Close and load*

We now have a table called *scoring* which contains scores given by judges *Judge1-Judge6*. Our data will resemble Fig 2 after all steps in section 2 have been performed.

	A	B	C	D
1	Judge	Number	Attribute	Value
2	1	1	Ethnic Presentation	9
3	1	1	Ethnic Performance	9
4	1	1	Telant Presentation	7
5	1	1	Talent Performance	7
6	1	1	Western Presentation	9
7	1	1	Western Performance	8
8	1	2	Ethnic Presentation	9
9	1	2	Ethnic Performance	9
10	1	2	Telant Presentation	10
11	1	2	Talent Performance	10
12	1	2	Western Presentation	8
13	1	2	Western Performance	7
14	1	2	QandA Performance	9
15	1	3	Ethnic Presentation	9
16	1	3	Ethnic Performance	9
17	1	3	Telant Presentation	8
18	1	3	Talent Performance	9
19	1	3	Western Presentation	9
20	1	3	Western Performance	9
21	1	4	Ethnic Presentation	9
22	1	4	Ethnic Performance	8
23	1	4	Telant Presentation	9
24	1	4	Talent Performance	9
25	1	4	Western Presentation	8
26	1	4	Western Performance	8
27	1	5	Ethnic Presentation	9
28	1	5	Ethnic Performance	8
29	1	5	Telant Presentation	10

scoring | Rounds | Judges | Sheet4

Fig2 Table *scoring*

Section 3

Create data model and create relationships

1. We intend to create the data models with all the required tables (in different sheets), namely, *scoring, Judges, Rounds, Contestants.* To add a table to the data model by use *Add to data model* from *Power pivot* tab. Repeat for each table.

2. After creating the data model, we proceed to establishing the relationships between the tables. To do this, we choosing *Manage* option from *Power Pivot* tab. A new window is opened.
3. In the newly opened window, go to *Design* tab and choose *Create Relationships.* Fig 3 shows the power pivot window after establishing required relationships between the tables (*scoring, Judges, Rounds, Contestants)*. To view the diagram, select *Diagram View* option from the *Home* tab, in the same window.

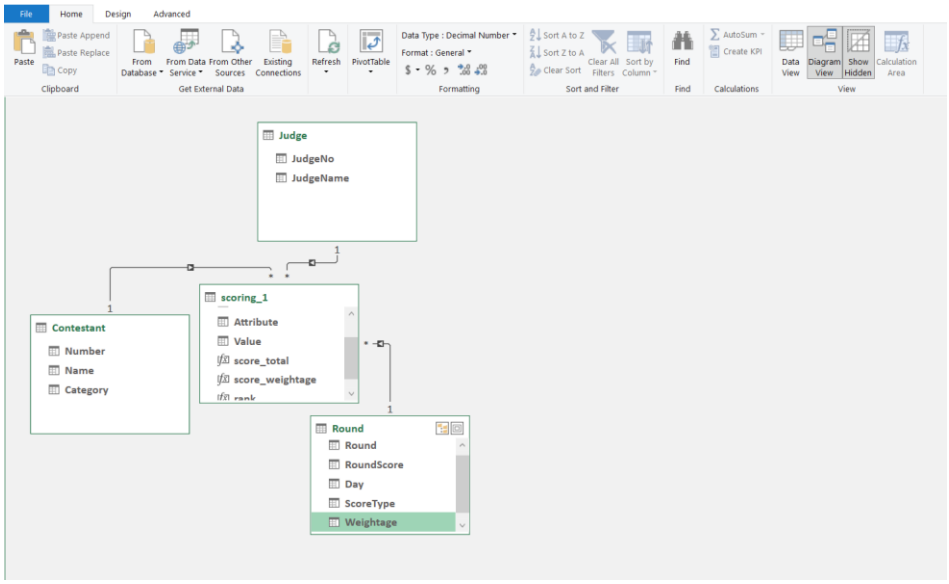


Fig 3. Creating Relationships between the tables.

Section 4

<u>Create pivot tables, adding measures and slicers</u>

1. In the final section we will create the pivot table required to make to calculate and show the weighted scores, rankings quickly and accurately. For that, first go back to the excel window. From the *Insert* tab select *Pivot Table -> From Data model.*
2. Add *Number* and *Name* column to the pivot table. Next, we apply formula to calculate score_total, score_weightage, rank and then add them as columns to the pivot table.
3. We apply the formula for these columns using *Measures->New Measure* from the *Power Pivot* table Fig. 4 shows the formulas used to calculate each column.

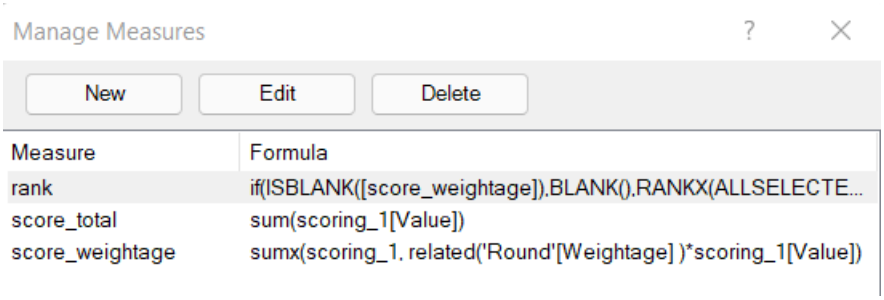


Fig 4 Formulas for measures