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# Report of AMI23B – Business Intelligence Lab1

We have approached by the organizers of a Beauty Pageant that faced difficulties last year to calculate all the scoring manually which caused delay and probability of existing risk in manual working. Now the organizers asked us to create a system to:

- easily input scores as they are entered by the judges
- Calculate weighted scores and rankings quickly and accurately based on multiple criteria

As we want to mix data from different tables , we use pivot table. In this dataset, we have six judges, two groups of contestants(two categories), multiple rounds(day1 and day2), scoring sheets.

Finally the organizers should easily determine which contestants advance to the final round, overall winners after the final round and specific awards.

Solution:

Step1: in the first step we should have a data Model, for this reason, in the power pivot the table Contestants, Rounds and Judges should be added to Data Model, and all tables related to judge1 to judge6 should be combined and append and through power pivot should be added to Data Model.

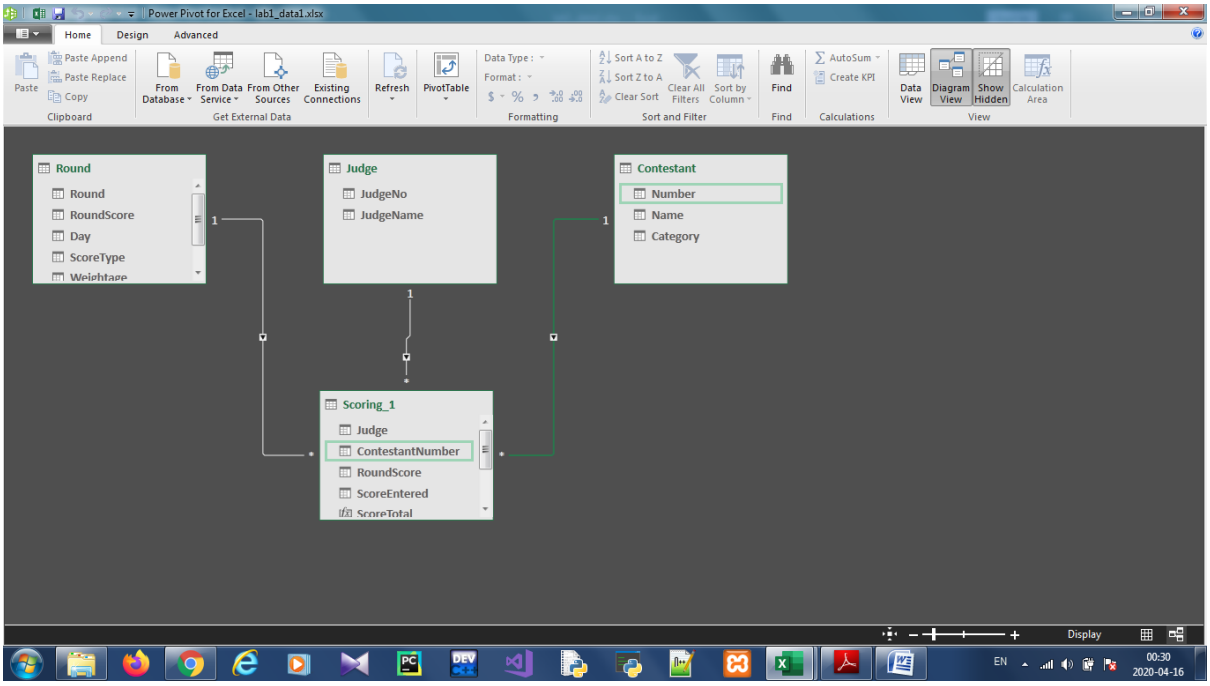
Before sending to power pivot we should clean, shape, change the type and transform them. Through power query, we change the name of appending table, remove unnecessary column, unpivot required tables, rename the header of columns, change the type and finally add to Data Model ( Here the tab named Scoring is the power pivot table).

| Judge | ContestantNumber | RoundScore | ScoreEntered |
|---|---|---|---|
| 1 | 1 | Ethnic Presentation | 9 |
| 1 | 1 | Ethnic Performance | 9 |
| 1 | 1 | Telant Presentation | 7 |
| 1 | 1 | Talent Performance | 7 |
| 1 | 1 | Western Presentation | 9 |
| 1 | 1 | Western Performance | 8 |

Step2:

Now we have 4 tables in Data Model: Rounds, Judges, Scoring, Contestants.

we should make relationship between in power pivot. As we cleaned our data set , we can easily look up tables.




In table scoring_1, ContestantNumber is related to number in Contestant table.

In Judge table, Judge Number is related to Judge in Scoring_1.

In Round table, RoundScore is related to RoundScore in Scoring_1.

Now the data and Lookup tables connected via relationships.

Step3:

In this step we create a new tab named Results, here we insert slicers based on the output that organizers ask us.

These slicers are: Category, Day, Round, ScorType and JudgeName(we will have 5 slicers)

Step4:

Here we should build Pivot Table. By creating Pivot Table in the Results tab, we put the name and Number in the row , now we should define the formula by DAX.

In Pivot Table, Measure , new measure , we define the correct formula.

Here is a quick description of each:

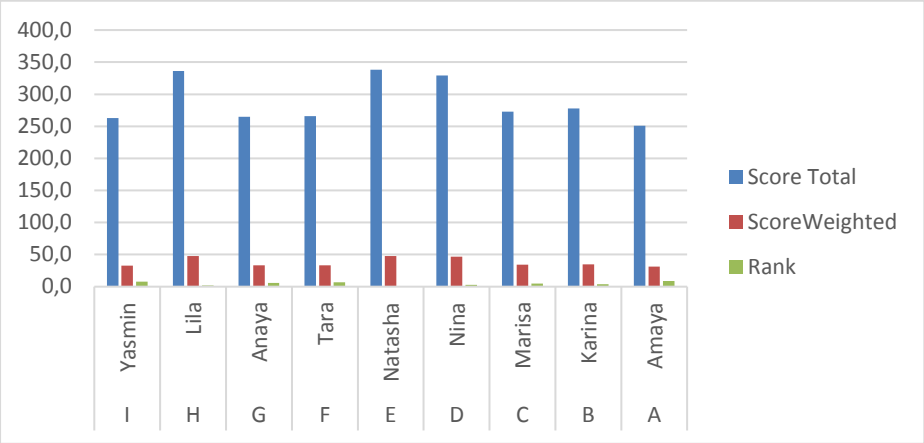
– ScoreTotal: Thanks to the Power Query shaping this is a simple sum

– RoundWeightage: Simple returns the weightage for a selected Round

– ScoreWeighted: Uses SUMX to iterate through each round and calculated the weighted score (weightage x round score)

– Rank: Uses RANKX with ALLSELECTED to rank our contestants based on ScoreWeighted]

Finally, by drag and drop the measures and columns into our excel pivots, we build the desired solution.




| Row Labels | Score Total | ScoreWeighted | Rank |
|---|---|---|---|
| **9** | **97,0** | **12,1** | **4** |
| Sarina | 97,0 | 12,1 | 4 |
| **8** | **97,0** | **12,15** | **3** |
| Ida | 97,0 | 12,15 | 3 |
| **7** | **100,0** | **12,5** | **2** |
| Jasmin | 100,0 | 12,5 | 2 |
| **6** | **88,0** | **11** | **10** |
| Diya | 88,0 | 11 | 10 |
| **5** | **96,0** | **11,95** | **6** |
| Maya | 96,0 | 11,95 | 6 |
| **4** | **96,0** | **12,05** | **5** |
| Ira | 96,0 | 12,05 | 5 |
| **3** | **92,0** | **11,5** | **7** |
| Mona | 92,0 | 11,5 | 7 |
| **2** | **101,0** | **12,7** | **1** |
| Trisha | 101,0 | 12,7 | 1 |
| **10** | **91,0** | **11,35** | **8** |
| Asha | 91,0 | 11,35 | 8 |
| **1** | **91,0** | **11,3** | **9** |
| Saniya | 91,0 | 11,3 | 9 |

| Row Labels | Score Total | ScoreWeighted | Rank |
|---|---|---|---|
| **I** | **88,0** | **11** | **8** |
| Yasmin | 88,0 | 11 | 8 |
| **H** | **98,0** | **12,25** | **3** |
| Lila | 98,0 | 12,25 | 3 |
| **G** | **89,0** | **11,1** | **7** |
| Anaya | 89,0 | 11,1 | 7 |
| **F** | **92,0** | **11,5** | **5** |
| Tara | 92,0 | 11,5 | 5 |
| **E** | **100,0** | **12,4** | **2** |
| Natasha | 100,0 | 12,4 | 2 |
| **D** | **97,0** | **12,15** | **4** |
| Nina | 97,0 | 12,15 | 4 |
| **C** | **91,0** | **11,35** | **6** |
| Marisa | 91,0 | 11,35 | 6 |
| **B** | **99,0** | **12,4** | **1** |
| Karina | 99,0 | 12,4 | 1 |
| **A** | **82,0** | **10,25** | **9** |
| Amaya | 82,0 | 10,25 | 9 |
| **Grand Total** | **836,0** | **104,4** | **1** |