# Task for BI Analyst

**Task 1:**

You are preparing a party for 300+ guests and you have to solve two problems:

1. Calculate and visualize your spending on food and drinks. Spends distribution by groups of guests.
2. Visualize your party statistics: age and gender distribution, food preferences by gender, age etc.   
   Feel free to play with the design and types of visualizations.

**Tips:**

Calculation of spends. Your guests have food preferences. Some of them don’t eat meat, the others like only seafood. You also presume that children and teenagers eat less than adults.

1. You have to define age group for a guest in accordance with a reference (sheet ‘Age\_Groups’).
2. Define spending for each guest based on food preferences and age group. Reference for prices per portion is available on the sheet ‘Costs\_per\_Portion’
3. Calculate total spending

**Requirements to the dashboards:**

1. Use different types of visualizations.
2. Use filter-actions on the dashboard.
3. Add filters to the dashboard. Each filter should be applicable to all relevant visualizations.

**Task 2:**

You are tasked with analyzing data for the Northwind company. The company wants to identify which categories are most popular among their customers. They also want to evaluate the performance of their sales employees. Sample of database you could find from GitHub:

[sql-server-samples/samples/databases/northwind-pubs at master · microsoft/sql-server-samples · GitHub](https://github.com/microsoft/sql-server-samples/tree/master/samples/databases/northwind-pubs)

Set up the database schema in any way possible using the MS SQL Server dialect.

Write a SQL query that returns the following information for each category:

* CategoryName
* Total Sales
* AverageOrderValue
* AverageTimeToShip (in days)
* Top5Ratio (total sales of the top 5 products to the total sales of all products in the category)
* AverageOrderFrequency (number of orders per customer)
* The result should be sorted by Total Sales in descending order.