**7PAM2000 Applied Data Science 1   
Assignment 1: Visualization**

**Question 1**

**Chart, line chart

Description automatically generated**

**In this graph, the lines represent the construction permits in 5 countries: Belgium, Canada, Germany, Iraq, and Israel. The graph shows the trend in dealing with construction permits in major countries. Overall, the trend is positive; it shows that dealing with construction permits is increasing in four countries compared to 2016, while construction permits in Iraq are declining. Following 2016, construction permits in Iraq increased and were trending upward. Construction permits in the four countries have increased. Except for Iraq, construction permits are decreasing in this country, and Germany produced the most construction permits from 2016 to 2020 when compared to the other four countries, according to the data.**

**Question 2**

**Chart, bar chart

Description automatically generated**

**According to the given data, the bar chart shows that the average of dealing with construction permits in five countries is: Belgium, Canada, Germany, Iraq, and Israel. This bar chart shows that the average number of constructions permits in Germany is high among the given countries. Belgium and Israel have nearly identical statistics. According to the bar chart, the average number of constructions permits in Iraq is very low when compared to those in five other countries.**

**Question 3**

**Chart, pie chart

Description automatically generated**

**This pie chart shows the construction permits of my selected five countries, which includes BELGIUM Germany, Israel, Canada and Iraq. The pie chart is used to show an average or percentage and to show data in categories. The average number of constructions permits in Germany is so high as compared to other countries, and the average in Iraq is very low.**

**Data Development:** https://data.worldbank.org  
**Data Link:** <https://databank.worldbank.org/source/doing-business/Type/TABLE/preview/on>  
**Databank:** Doing Business  
**Country:** Belgium, Canada, Germany, Iraq, Israel  
**Series:** Dealing with construction permits (DB16-20 methodology) – Score  
**Availability Range Year:** 2016, 2017, 1028, 2019, 2020  
**GitHub Repo:** https://github.com/aasimghaffar/7PAM2000-Applied-Data-Science-1-Assignment-1-Visualisation.git

**Data xlsx File: https://github.com/aasimghaffar/7PAM2000-Applied-Data-Science-1-Assignment-1-Visualisation/blob/main/data.xlsx**