# Data Visualization - Questions and Answers

## 73. Why is data visualization important in data science?

Data visualization is important because it helps communicate data insights clearly and effectively. It allows data scientists and stakeholders to identify patterns, trends, and outliers in data, making complex data more accessible and understandable.

## 74. Describe the types of charts and graphs commonly used in data visualization.

Common types of charts and graphs include bar charts, line graphs, pie charts, histograms, scatter plots, box plots, and heatmaps. Each type is suited for different kinds of data and analysis objectives.

## 75. What is the purpose of a heatmap in data visualization?

A heatmap is used to represent data values through color gradients. It is particularly useful for visualizing the magnitude of values across a matrix or to show correlation between variables in a dataset.

## 76. Explain the concept of storytelling through data visualization.

Storytelling through data visualization involves presenting data in a narrative format that guides the audience through insights and conclusions. It combines visuals with context to make data-driven messages more compelling and memorable.

## 77. How can you create interactive data visualizations in Python?

Interactive data visualizations in Python can be created using libraries such as Plotly, Bokeh, and Dash. These tools allow users to interact with charts through zooming, filtering, and hovering to explore data more deeply.