M. M. Institute of Computer Technology & Business Management M.M. (Deemed to be University), Mullana			Assignment 01
Session :2025-2026 (Even)		**Class/Semester :BCA – 6th Semester**	
Subject Code: BCA - 608		**Subject Name: Data Visualization**	
Lecture : 3		**Tutorial : 0**	
Max. Marks Theory:60	**Max. Marks Sessional: 40**	**Credits : 3.0**	
Assigned Date: 28th Jan 2026	**Submission Date: 01st Jan 2026**	**Evaluated/Distributed On:**	

Q.No.	Question	Marks	Remarks
1.	Define data visualization.	01	
2.	What is a scatter plot used for?	01	
3.	What is a time-series visualization?	01	
4.	Write one example of a visualization widget.	01	
5.	What is the main purpose of data visualization?	01	
6.	What is meant by visualization design?	01	
7.	Write two key factors affecting visualization design.	02	
8.	Define data representation and data presentation.	02	
9.	Describe the purpose, function, and tone of visualization.	04	
10.	Explain various data visualization tools and widgets.	04	
11.	Explain the seven stages of data visualization.	06	
12.	Describe scatter plots and their role in finding correlations.	06	

Assignment Outcome (AO):

- Understand the concept and context of data visualization and explain its definition, purpose, and objectives clearly.
- Explain the methodology and seven stages of data visualization, meaningful visual insights.
- Identify key factors affecting visualization design, including purpose, tone, and design choices.
- Describe various data visualization tools and justify their use for effective data analysis and decision-making.

Course Outcome (CO): After completion of this course, student can:

- Understand basic data visualization techniques to real-world datasets.
- Apply design principles such as color theory, layout to enhance the effectiveness of visualizations.
- Analyze and interpret time-series visualizations to draw meaningful insights.
- Analyze data visualizations to identify potential security vulnerabilities.
- Evaluate the effectiveness of security measures in data visualizations.

Bloom's Taxonomy Level (BTL):

1. Remembering 2. Understanding 3. Applying 4. Analyzing 5. Evaluating 6. Creating

Question wise Mapping Matrix (with AO, CO, BTL)												
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12
AO No.	1	1	1	1	1	1	1	1	2	1	1	2
CO No.	1	1	1	1	1	1	1	1	2	1	1	2
BTL	1	1	1	1	1	1	2	2	3	2	2	3
Marks	1	1	1	1	1	1	2	2	4	4	6	6

	Weightage (in %age)
AO	**1:**46%, **2:**54%
CO	**1:**46% , **2:**54%
BTL	**1:**40% , **2:**16% **3:**34%