



**COMSATS University Islamabad, Wah Campus**  
Department of Computer Science

**Name:** Muhammad Ali Ahmad  
**Course:** Introduction to Data Science  
**Class:** BSE-7A  
**Semester:** Fall 2023

**Reg No:** FA20-BSE-006  
**Total Marks:** 10  
**Dated:** 10/12/2023  
**Submission Deadline:** (12-December-2023) In Class.

**Assignment (04) (CLO 4)**

**Format:**

- Make sure your assignment has a proper cover page.
- Your assignment should be submitted in **HANDWRITTEN hardcopy** format.
- This is an **individual** assignment.
- Any kind of plagiarism or cheating will result in **zero** marks without negotiation.

**Assignment Tasks:**

1. Use HAC to form **Complete-link** clusters for the following data points.
2. Construct a dendrogram for the clusters formed at each step.
3. The measure of distance should be Euclidean.

| Points | X    | Y    |
|--------|------|------|
| A      | 0.24 | 0.35 |
| B      | 0.08 | 0.44 |
| C      | 0.65 | 0.88 |
| D      | 0.23 | 0.32 |
| E      | 0.18 | 0.20 |
| F      | 0.99 | 0.25 |
| G      | 0.58 | 0.75 |