Relational Algebra Practice: Union, Intersection, and Difference

**Scenario:** A university maintains two relations, **Students\_2024** and **Students\_2025**, to record information about students enrolled in different years.

**Students\_2024**:

|  |  |  |
| --- | --- | --- |
| **Student\_ID** | **Name** | **Major** |
| 101 | Ali | Computer Sci. |
| 102 | Ayesha | Physics |
| 103 | Bilal | Mathematics |
| 104 | Zara | Chemistry |

**Students\_2025**:

|  |  |  |
| --- | --- | --- |
| Student\_ID | Name | Major |
| 103 | Bilal | Mathematics |
| 104 | Zara | Chemistry |
| 105 | Hamza | Biology |
| 106 | Hina | Computer Sci. |

1. Retrieve the list of all unique students (Student\_ID and Name) who are in either **Students\_2024** or **Students\_2025**.
2. Retrieve the list of students (Student\_ID and Name) who are enrolled in both **Students\_2024** and **Students\_2025**.
3. Retrieve the list of students (Student\_ID and Name) who are enrolled in **Students\_2024** but not in **Students\_2025**.
4. Retrieve the list of students (Student\_ID and Name) who are enrolled in **Students\_2025** but not in **Students\_2024**.
5. Find the list of students (Student\_ID and Name) who are enrolled in only one of the two relations (not both).

