Lecture Notes

Course Number: CSC 513
Instructor: Dr. Singh

Lecture Number: 24A
Data-Centric View: 1

```xml
<relation name='Student'>
  <tuple>
    <attr1>V11</attr1>
    ...
    <attrn>V1n</attrn>
  </tuple>
</relation>
```

- Extract and store via mapping to DB model
- Regular, homogeneous structure
Data-Centric View: 2

- Ideally, no mixed content: an element contains text or subelements, not both
- Any mixed content would be templatic, i.e.,
  - Generated from a database via suitable transformations
  - Generated via a form that a user or an application fills out
- Order among siblings likely irrelevant (as is order among relational columns)

Expensive if documents are repeatedly parsed and instantiated
Document-Centric View

- Irregular: doesn’t map well to a relation
- Heterogeneous data
- Depending on entire doc for application-specific meaning
Data- vs Document-Centric Views

- **Data-centric**: data is the main thing
  - XML simply renders the data for transport
  - Store as data
  - Convert to/from XML as needed
  - The structure is important

- **Document-centric**: documents are the main thing
  - Documents are complex (e.g., design documents) and irregular
  - Store documents wherever
  - Use DBMS where it facilitates performing important searches