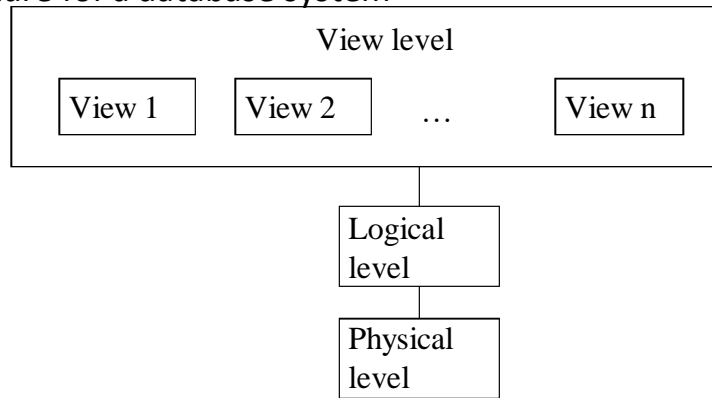




# View of Data

An architecture for a database system





## Levels of Abstraction



- **Physical level:** describes how a record (e.g. customer) is stored.
- **Logical level:** describes data stored in database, and the relationships among the data.

```
type customer = record  
    name: string;  
    street: string;  
    city: integer;  
end;
```

- **View level:** application programs hide details of data types. Views can also hide information (e.g. salary) for security purposes.



## Instances and Schemas

- Similar to types and variables in programming languages
- Schema – the logical structure of the database (e.g., set of customers and accounts and the relationship between them)
- Instance – the actual content of the database at a particular point in time



THANK YOU