Overview

- series of steps viewed as atomic unit
  - either fully executed or not
- transactions can be fully committed or rolled back in case an error occurs
  - includes [[Logging and Recovery]]
- transforms database from consistent state into another consistent state
  - via [[Locking and Concurrency Control]]
- transaction satisfy [[ACID]] properties
  - dependent on [[Transaction Isolation Level]]

[[SQL]] Transaction Examples

- nple

  Transfer 100 Euros from Account 107 to 999

```
START TRANSACTION ISOLATION LEVEL SERIALIZABLE;
   UPDATE Account SET Balance=Balance-100
      WHERE AID = 107;
   UPDATE Account SET Balance=Balance+100
      WHERE AID = 999;
COMMIT TRANSACTION;
```

- ▪ **Terminology by Example**