Internet Architecture Part 1
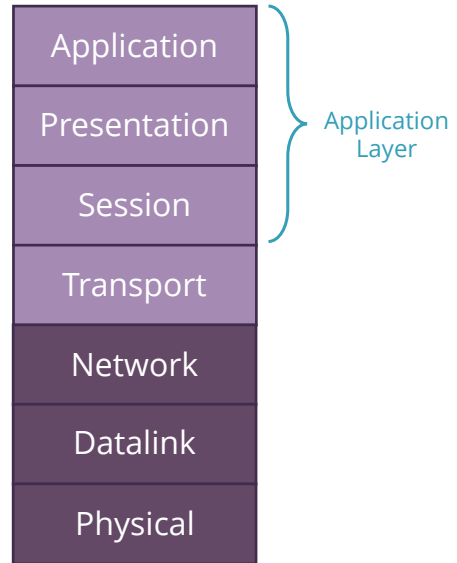
MCIT 595

Layering

- Layering is a particular form of modularization
- Reusability and composability
- System is broken into a vertical hierarchy of logically distinct entities (layers)
- Service provided by one layer is based solely on the service provided by the layer below

ISO OSI Reference Model for Layers

- ISO: International Standards Organization
- OSI: Open System Interface

Application
Presentation
Session
Transport
Network
Datalink
Physical

Application Layer (Application, Presentation, Session)

Three Properties of Layers

- **Service**: **what** a layer does

- **Service interface**: **how** to **access** the service
  - Interface for layer above

- **Protocol** (peer interface): **how** peers communicate
  - Set of rules and formats that govern the communication between two network boxes
  - Protocol does not govern the implementation on a single machine, but how the layer is implemented between machines