Cloud Computing Characteristics

1. **Common Characteristics**
    a. Massive Scale & Scalability:
        - *Infrastructure capacity allows for traffic spikes and minimizes delays.*
    b. Resilient Computing
        - *Downtime minimized in event of disaster due to mirrored solution*
    c. Homogeneity
        - *Even with different cloud providers, an open cloud make it easy for different organizations to work with each other.*
    d. Geographic Distribution
    e. Virtualization
    f. Service Orientation
    g. Low Cost Software
    h. Advanced Security
2. **5 Essential Characteristics**:
    a. On-demand self-service

- *Users can provision resources and use them without human interaction from the service provider*

b. Broad network access
   - *Resources available over the network, and can be accessed by diverse client platforms*

c. Resource pooling
   - *Multiple customers can share the same infrastructure and applications with security and privacy*
   - *Location Independence: customer generally has no control or knowledge over the exact location of provided resources but may be able to specify location at a higher level of abstraction(e.g., country, state, or datacenter).*

d. Rapid elasticity
   - *Automatically and quickly acquire and dispose resources when needed*

- *Quickly and easily scale based on demand*
- *To the consumer, the capabilities available for provisioning often appear to be unlimited and can be purchased in any quantity at any time.*

e. Measured service
   - *Usage is measured, users pay correctly for what they have used*