Semantic Web Overview:

1. **What is the Semantic Web?**
   - The Semantic Web is an extension of the World Wide Web, enabling machines to understand and interpret the meaning of web content, facilitating more intelligent search, data integration, and knowledge sharing.
2. **Another name for Semantic Web?**
   - Also known as the "Web of Data" or "Linked Data".
3. **How is meaning expressed on the Semantic Web?**
   - Meaning is expressed through:
     - Ontologies (conceptual frameworks)
     - RDF (Resource Description Framework) statements (subject-predicate-object triples)
     - Vocabulary standards (e.g., (link unavailable))
     - Semantic annotations (metadata)
4. **Three inherent benefits of the Semantic Web:**
   - Improved search accuracy and relevance
   - Enhanced data integration and interoperability
   - Increased automation and decision-making capabilities
5. **Key elements in the first three layers of the Semantic Web stack:**
   - **Layer 1: Syntax (HTTP, URI, XML)**
     - HTTP (Hypertext Transfer Protocol)
     - URI (Uniform Resource Identifier)
     - XML (Extensible Markup Language)
   - **Layer 2: Data (RDF, RDF Schema)**
     - RDF (Resource Description Framework)
     - RDF Schema (RDFS)
     - Data interchange formats (e.g., JSON-LD)
   - **Layer 3: Ontology (RDFS, OWL)**
     - RDFS (RDF Schema)
     - OWL (Web Ontology Language)
     - Domain-specific ontologies (e.g., FOAF, Dublin Core)
6. **How do these layers contribute to the Semantic Web?**
   - These layers provide the foundation for the Semantic Web's higher layers, enabling more advanced features like reasoning, rules, and querying.