**Web Services**

What is a Web Service?

Software system designed to support interoperable machine-to-machine interaction over a network.

Web Service key terminology:

Designed for machine-to-machine (or application-to-application) interaction

Should be interoperable - Not platform dependent

Should allow communication over a network

Is the Todo Management Application a Web Service  
It delivers HTML output - Not consumable by other applications.

Can I reuse the Business Layer by creating a JAR?

Not Platform independent

Communication of Changes

Managing Dependencies - like Database

An exchange between the web service will be taken place between the application and web service.

How does Application A and Web Service convert its internal data to (XML or JSON) :

Key Terminology Request and Response Service Provider or Server Service Consumer Client Service Definition Transport HTTP and MQ

Message Exchange Format XML and JSON

Web Service Groups

SOAP-based

REST-styled

SOAP:

Format- SOAP XML Request – SOAP XML Response

Transport:

SOAP over MQ

SOAP over HTTP

SERVICE DEFINITION:

WSDL

REPRESENTATION STATE TRANSFER(REST):

REST is a style of architecture for distriuted hypermedia system.

REST:

Data Exchange Format - No Restriction. JSON is popular

Transport

Only HTTP

Service Definition

No Standard. WADL/Swagger/…

REST vs SOAP :

Restrictions vs Architectural Approach

Data Exchange Format

Service Definition

Transport

Ease of implementation

Versioning :

Media type versioning (a.k.a “content negotiation” or “accept header”)

GitHub

Custom) headers versioning :

Microsoft

URI Versioning :

Twitter

Request Parameter versioning :

Amazon

Factors :

URI Pollution

Misuse of HTTP Headers

Caching

Can we execute the request on the browser?

API Documentation

No Perfect Solution