



CS544 EA  
Integration  
REST

# Remote Invocation

- There are many forms of Remote Invocation
  - CORBA, RMI, XML-RPC, SOAP, ...
  - Web services are a form of remote invocation
- The most popular form of WebService today are **RESTful webservices**

# Web Service

- A web service offers functionality that can be called by clients using standard protocols
  - Screen Scraping – the origins of web services
- **RESTful** web services use **HTTP**
  - Are officially payload (data) agnostic
  - Most popular data format: **JSON**

# HTTP

- With web pages we use GET and POST
  - GET to retrieve POST to insert / update data
- RESTful uses **more HTTP methods**:
  - GET to *retrieve* data
  - POST to *create* (a new URI is assigned)
  - PUT to *replace* data at a URI
  - PATCH to *update* or *create* data at a URI
  - DELETE to *delete* data and its URI

# JSON

- The JavaScript Object Notation {
  - Created by Douglas Crockford  
JavaScript: the Good Parts
  - Human readable  
attribute / value pairs
  - A lightweight alternative to XML

```
{  
  "firstName": "John",  
  "lastName": "Smith",  
  "isAlive": true,  
  "age": 27,  
  "address": {  
    "streetAddress": "21 2nd Street",  
    "city": "New York",  
    "state": "NY",  
    "postalCode": "10021-3100"  
  },  
  "phoneNumbers": [  
    {  
      "type": "home",  
      "number": "212 555-1234"  
    },  
  ],  
}
```