

## REST, JSON, and APIs

**TOTAL POINTS 10**

### 1.Question 1

**Who is credited with the REST approach to web services?**

- ☐ Daphne Koller
- ☐ Leonard Klienrock
- ☒ Roy Fielding
- ☐ Bjarne Stroustrup
- ☐ Vint Cerf

1 point

### 2.Question 2

**What Python library do you have to import to parse and handle JSON?**

- ☐ BeautifulSoup
- ☐ import re
- ☒ import json
- ☐ ElementTree

1 point

### 3.Question 3

**Which of the following is a web services approach used by the Twitter API?**

- ☐ CORBA
- ☒ REST
- ☐ XML-RPC
- ☐ SOAP

1 point

### 4.Question 4

**What kind of variable will you get in Python when the following JSON is parsed:**

```
{ "id" : "001",  
  "x" : "2",  
  "name" : "Chuck"  
}
```

- ☐ A list of tuples
- ☐ A list with six items
- ☐ A tuple with three items
- ☒ A dictionary with three key / value pairs
- ☐ A list with three items

1 point

### 5.Question 5

Which of the following is *not* true about the service-oriented approach?

- ☐ An application makes use of the services provided by other applications
- ☐ Standards are developed where many pairs of applications must work together
- ☒ An application runs together all in one place
- ☐ Web services and APIs are used to transfer data between applications

1 point

### 6.Question 6

Which of these two web service approaches is preferred in most modern service-oriented applications?

- ☒ REST - Representational state transfer
- ☐ SOAP - Simple Object Access Protocol

1 point

### 7.Question 7

What library call do you make to append properly encoded parameters to the end of a URL like the following:

```
http://maps.googleapis.com/maps/api/geocode/json?sensor=false&address=Ann+Arbor%
```

2C+MI

- ☒ urllib.parse.urlencode()
- ☐ re.match()
- ☐ re.encode()
- ☐ urllib.urlcat()

1 point

### 8.Question 8

**What happens when you exceed the Google geocoding API rate limit?**

- ☐ The API starts to perform very slowly
- ☐ Your application starts to perform very slowly
- ☐ You cannot use the API until you respond to an email that contains a survey question
- ☒ You cannot use the API for 24 hours

1 point

### 9.Question 9

**What protocol does Twitter use to protect its API?**

- ☐ WS\*Security
- ☐ SOAP
- ☒ OAuth
- ☐ PKI-HMAC
- ☐ Java Web Tokens
- ☐ SHA1-MD5

1 point

### 10.Question 10

**What header does Twitter use to tell you how many more API requests you can make before you will be rate limited?**

- ☐ x-max-requests
- ☒ x-rate-limit-remaining

- ☐ content-type
- ☐ x-request-count-down

1 point