



# Android Week Five

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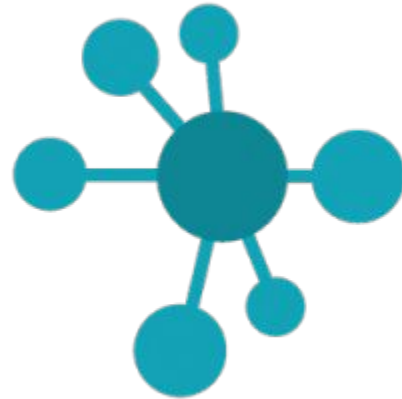
# Last Week

- Open Weather Map API
- Networking
  - Building URL
  - Establish HTTP Connection



# This Week

- Networking
  - Read from Input Stream
  - JSON
  - Parse JSON Response
  - Extract Data



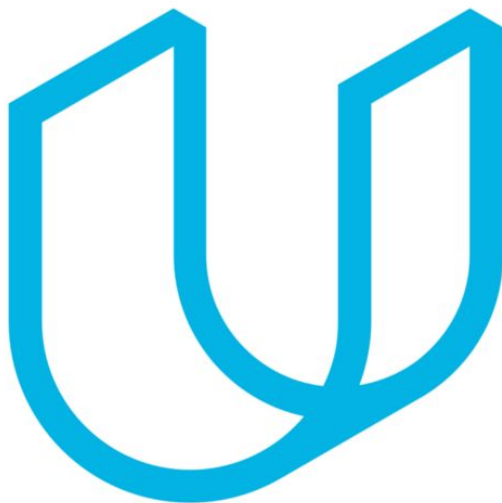
# Read From Stream

- Input Stream
  - Sequence of bytes read from server
- Input Stream Reader
  - Convert bytes to characters
- Buffered Reader
  - Read a chunk of characters at a time to save time
- Charset
  - Specifies how to translate bytes into characters
  - UTF-8



<https://www.youtube.com/watch?v=CTz6gfx44II>

# JSON



<https://www.youtube.com/watch?v=0lOCgHrTJGU>

# Extract From JSON

- JSON Object
- JSON Array
- Time
- ID
- Temperature
- Description
- Pressure
- Humidity
- Wind Speed

root

list

```
{
  "cod": "200",
  "message": "0.0094",
  "cnt": 37,
  "list": [
    {
      "dt": 1519808400,
      "main": {
        "temp": 276.5,
        "temp_min": 276.5,
        "temp_max": 277.998,
        "pressure": 995.44,
        "sea_level": 1019.34,
        "grnd_level": 995.44,
        "humidity": 92,
        "temp_kf": -1.5
      },
      "weather": [
        {
          "id": 500,
          "main": "Rain",
          "description": "light rain",
          "icon": "10d"
        }
      ],
      "clouds": {
        "all": 92
      },
      "wind": {
        "speed": 3.76,
        "deg": 82.0004
      },
      "rain": {
        "3h": 2.32
      }
    }
  ],
}
```

time

temperature



# Fetch Weather

- Combine all methods together
- 
1. buildURL()
  2. makeHTTPConnection(url)
    - a. readFromStream
  3. extractFromJSON(jsonResponse)

# Next Week

- Threading
- AsyncTasks

