



# JSON

- JSON is an open standard data interchange format
- Most modern languages can parse JSON
- JSON data objects are much smaller than the corresponding XML

```
{
  "studentID": 101,
  "studentName": "Kate Brown",
  "class": "5B",
  "studentAge": 15,
  "isNRI": true,
  "studentAddress": {
    "line 1": "20 Chaucer Rd",
    "city": "Lincoln",
    "zip": 32910
  },
  "studentPhone": [
    7535897889,
    3298769766
  ],
  "studentFeesPaid": null,
  "courses": [
    [
      "English",
      "French",
      "Spanish"
    ],
    [
      "Maths",
      "Physics"
    ],
    [
      "Art",
      "Drama"
    ]
  ],
  "activities": [
    {
      "sports": [
        "gymnastics",
        "riding",
        "ice skating"
      ]
    },
    {
      "exchange trips": []
    },
    {
      "societies": [
        "theatre group",
        "photography",
        "pottery"
      ]
    }
  ]
}
```

## JSON DATA TYPES

Number – a signed, floating point number  
No separate type for integers

Strings – "Unicode, in double quotes"  
\" escapes " within a string

Boolean true or false

Null – an empty value

Array: an ordered list of 0 or more values, each of which may be of any type. Arrays use square bracket notation with comma-separated elements

Object: an unordered collection of key-value pairs where the keys are strings. Each key is unique within an object. Objects use curly bracket notation and commas to separate each pair, within each pair use ':' to separate the key from its value

Objects can contain arrays Arrays can contain objects

Check JSON correctness at <https://jsonlint.com/>

Format JSON objects at  
<https://www.freeformatter.com/json-formatter.html>