

institute of



# Mobile Application Development



Flutter  
JSON conversion



Northumbria  
University  
NEWCASTLE

Office for  
Students



# So far,

We have created user interfaces, animations, and navigated between screens. Now it's time to create content dynamically and preferably from the Internet.

# JSON

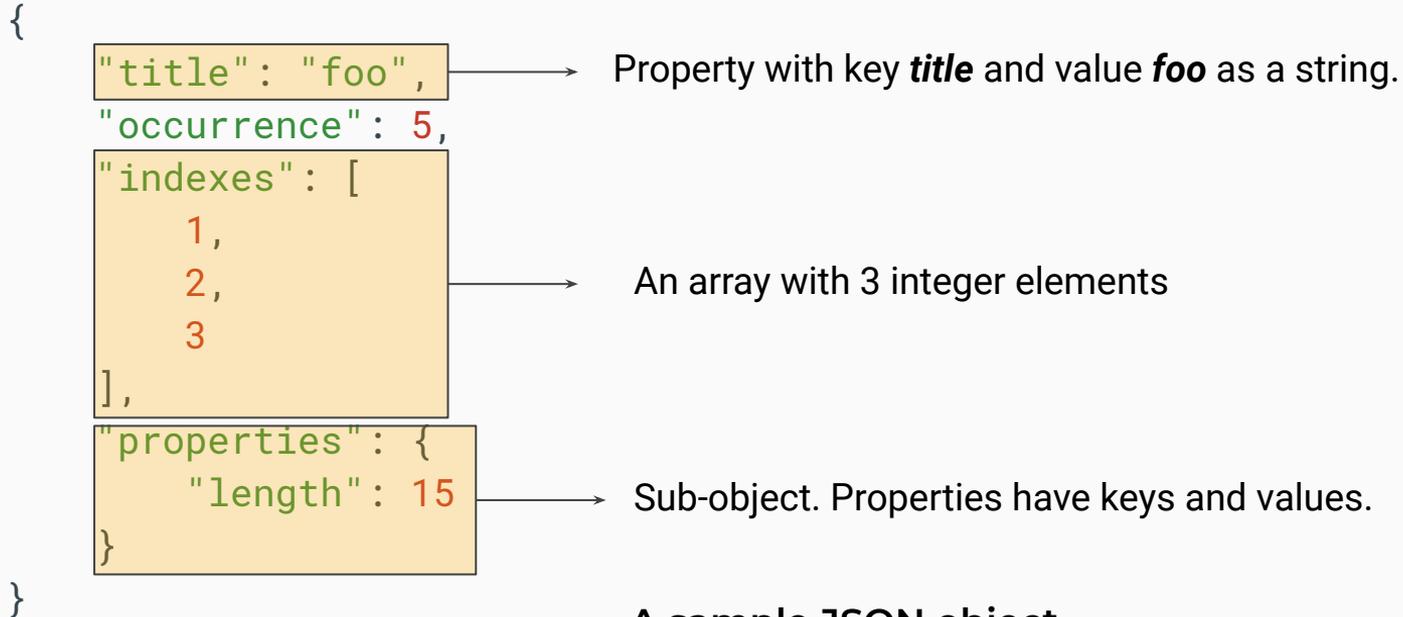
Transferring data between the applications on the Internet needs a common data representation between applications. Most of the time, we can encounter JSON as the common data type.

# JSON

```
{  
  "title": "foo",  
  "occurrence": 5,  
  "indexes": [  
    1,  
    2,  
    3  
  ],  
  "properties": {  
    "length": 15  
  }  
}
```

A sample JSON object

# JSON



A sample JSON object

# JSON to Dart

Dart provides `dart:convert` module to convert JSON data represented as string to Map objects.

# Converting JSON String to Dart Map

```
import 'dart:convert';
```

```
final userJsonString = """{  
  "name": "John Smith",  
  "email": "john@example.com"  
}""";
```

Regular string object containing formatted JSON data.

```
Map<String, dynamic> user = jsonDecode(userJsonString);
```

Converting string to Map object.

# Map object to Dart Object

To convert Dart Map objects into plain Dart objects, we can implement a helper function and a named constructor to convert from Map objects (JSON) or convert to Map objects.

# Map object to Dart Object

```
class User {  
  String name;  
  String email;
```

```
  User({this.name, this.email});  
}
```

→ Default constructor.

# Map object to Dart Object

```
User.fromJson(Map<String, dynamic> json) {  
  name = json['name'];  
  email = json['email'];  
}
```

Named constructor to instantiate object variables from given Map object.

# Dart object to Map Object

```
Map<String, dynamic> toJson() {
```

```
    final Map<String, dynamic> data = new Map<String, dynamic>();  
    data['name'] = this.name;  
    data['email'] = this.email;  
    return data;  
}
```

Helper function to create Map from given object.

# Pro Tip!

Instead of implementing the named constructor and toJson function, we can generate those using the [https://javiercbk.github.io/json\\_to\\_dart/](https://javiercbk.github.io/json_to_dart/).

Just paste the JSON string and create the dart code, automatically!