API integration Documentation

This documentation explains how to fetch the json from numbersapi.com and display it in our UI

http://numbersapi.com/42?json

```
{
 "text": "42 is the number of museums in Amsterdam (Netherlands has the
highest concentration of museums in the world).",
 "number": 42,
 "found": true,
 "type": "trivia"
}
```

1. **UI Display Final Output**
2. **Dependencies required**
    a. **Install package http from pub.dev**
    `flutter pub add http`
    b. **build_runner**
    dart pub add dev:build_runner
    c. **JSON annotation**
    `flutter pub add json_annotation`
    d. **JSON Seralizable**
    `dart pub add dev:json_serializable`
3. **Restart IDE**
4. **Create a model to accept the incoming data and pass it to the UI**
5. **Create a folder named Model in the lib**
6. **Use the plugin JSON to DART plugin. Install it from the extension session**
7. **After the installation, copy the json out put to the clipboard**

```
{
"text": "100 is the number of pounds in an American short hundredweight.",
"number": 100,
"found": true,
"type": "trivia"
}
```

8. Click Ctr+Shift+p and search for JSON to DART: from clipboard to code generation classes
9. Enter the model class name to be generated eg: GetNumberFactModel and press enter
10. For the next question Select JSON Seralizable and press enter
11. For the next question select No for equality operator press enter
12. For the next Question select no for immutable class press enter
13. For the next Question select no for toString() press enter
14. For the next Question select no for copyWith()press enter
15. For the next dialog box click the model folder in lib and the plugin will generate the Model class
16. This will generate the model class. Open the class and annotate each field with JSONKEY as follows

```dart
import 'package:json_annotation/json_annotation.dart';

part 'get_number_fact_model.g.dart';
```

```
@JsonSerializable()
class GetNumberFactModel {
  @JsonKey(name: 'text')
  String? text;
  @JsonKey(name: 'number')
  int? number;
  @JsonKey(name: 'found')
  bool? found;
  @JsonKey(name: 'type')
  String? type;
```

17. Run the command is persist errors in the model class
    flutter packages pub run build_runner watch --use-polling-watcher --delete-conflicting-outputs
18. **Create a folder and file named API/api.dart in lib**
19. **In api.dart**
    a. **Import the http package with alias name http**
    b. **Create a function getNumberFact with a required int parameter**

```
Future<GetNumberFactModel> getNumberFact({required int number})async{

}
```

    c. **Make a call to the Server using the api as given below**

```
Future<GetNumberFactModel> getNumberFact({required int number}) async {
  final response = await
http.get(Uri.parse('http://numbersapi.com/$number?json'));
}
```

    d. **response.body contains the results of the API fetch**
20. do the json decode on the response.body
21. convert the JSON values to ModelClass using fromJSON function
22. return the ClassModel Object

```
Future<GetNumberFactModel> getNumberFact({required int number}) async {
  final response = await http.get(
    Uri.parse('http://numbersapi.com/$number?json'),
  );
  final result = jsonDecode(response.body) as Map<String, dynamic>;

  final data = GetNumberFactModel.fromJson(result);
  return data;
}
```

23. Call this function on UI button click and pass the integer value from the textbox
24. Display the result using setState function