# BBC Radio 4 iOS Application

For this coding exercise, we will assume that BBC Radio 4 has given you a contract to build an iPhone/iPad application for Radio 4.

The application will simply display BBC Radio 4 schedule to the users. You are asked to complete the first iteration to be demoed to the stakeholders.

## Requirements

* The first iteration should be simple. A Master/Detail architecture is sufficient.
* **Master View Controller** is responsible for displaying Radio 4 program schedules of Today, Tomorrow and Yesterday. Each day should be a cell in the Master View Controller table, which contains thumbnails of each program. So the first cell will contain the list of programs of Today, second cell Tomorrow and so on. In order to represent each program, we would like you to use a thumbnail image and some text to represent the title of the program. The thumbnails are available through a REST API (see Appendix 2). You can use a Collection view to layout all the thumbnails and the text. If you think that there might be a better alternative UI component, you are free to use it.
* When the user touches one of the thumbnails, the application should take the user to the **Detail page** where you should display the details of that particular program (see UI sketches in Appendix 1).
* The application should regularly refresh the Master view to reflect the latest programs. Pull to refresh should also be provided to Master view.
* Each day’s data is provided by a REST API (see Appendix 2). So the first iteration should be able to directly use this data, parse and populate the necessary views of the user interface.
* The user should be able to navigate back to the master view after a visit to the Detail page.

## Optional Requirements

If you are able to finish this first iteration, we will be very happy to see the following feature:

* Match the current time of the user against the Today’s program and indicate if the user missed the program or not. A greyed out program title and some red “Missed” text should be sufficient.

## Technical Details

* You do not have to worry about the graphics at the moment. However, we are expecting a good UI/UX.
* For your convenience an Xcode project is provided. You MUST use this for your deliverable.
* You can use any Apple iOS framework to complete the MUST requirements. You are not allowed to use any Third party libraries.
* When you think that some of the requirements are not well defined, you can make reasonable assumptions.

## Deadline

The whole work should not take more than a day or two.

# Appendix 1

thumbnail

Master

Detail

Today

Tomorrow

Yesterday

# Appendix 2

## REST API

BBC Radio 4 provides 3 REST API endpoints for communicating radio programs with clients.

List of Today’s program: <http://www.bbc.co.uk/radio4/programmes/schedules/fm/today.json>

List of Tomorrow’s program: <http://www.bbc.co.uk/radio4/programmes/schedules/fm/tomorrow.json>

List of Yesterday’s program: <http://www.bbc.co.uk/radio4/programmes/schedules/fm/yesterday.json>

Each JSON provides several “programme” objects that we are interested in displaying to the user.

You can retrieve the following attributes from the JSON objects in order to represent a program object.

Title: programme -> display\_titles -> title

Thumbnail URL: image->pid

**How to fetch images?**

pid attribute of image indicates the name of the image. Please use the following format for accessing the images for thumbnails.

<http://ichef.bbci.co.uk/images/ic/480x270/p031cz3h.jpg>

<http://ichef.bbci.co.uk/images/ic/480x270/p02nr6ks.jpg>

**Detail Page**

When the user taps on a programme in the collection view, the application should display the Detail page. Detail page should contain the metadata related to the programme along with a reasonable sized image. Necessary JSON attributes for detail page that we want to display:

start, end, duration

programme -> display\_titles -> title

short\_synopsis

image->pid

type