

SMART

new frontier group

DoIT practice for Front-end Developers

Project 4: Simple Angular 2+ application

1. Introduction:

Angular is a JavaScript MVC framework developed by Google that lets you build well structured, easily testable, and maintainable front-end applications.

Many developers dive right into projects without thinking of the organization or structure of the code they're writing. It's easy to hack projects together, but the best developers spend the extra time to think about the organization of their application and adhere to sound organizational practices.

In order to write clean code that will get you your next job or promotion, you'll need to have a solid understanding of organizational techniques, and you'll need to implement those techniques in your projects. Software developers who write clean and organized code are surprisingly hard to find, so if you can master code organization you'll be a step above the rest.

2. Practice task:

First, let's decide the nature of the app we want to build. In this guide, we'd prefer not to spend too much time on the back-end, so we'll write something based on data that's easily attainable on the Internet—like a sports feed app.

We will use an autosport API service to act as our back-end. Luckily, the guys at Ergast are kind enough to provide a free motorsport API that will be perfect for us.

Application will have three main views:

1. As we're trying to build a sports feed for a racing championship, let's begin with the most relevant view: **the championship table**.
2. From the championship table, when you click on any driver name, goes to **list of driver's results on all grand prix's**.

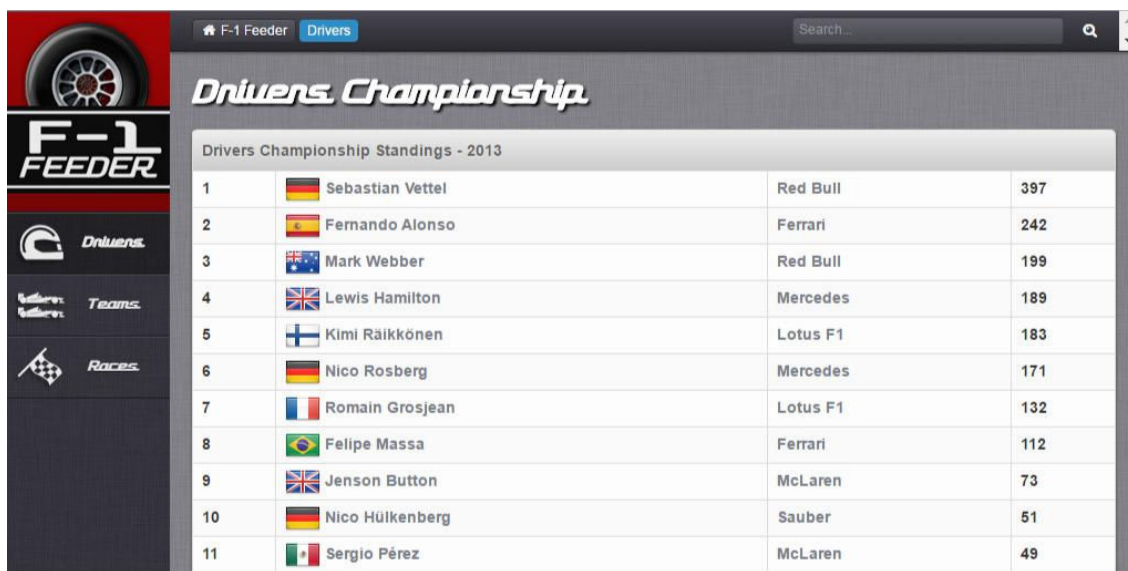
3. From the list of driver's results, when you click on a specific grand prix, goes to **standings for this specific grand prix**.

You will use **Angular 2+**.

You will organize the static part (HTML,CSS with or without LESS/SASS) as per your preference. Usage of the task/package managers are optional but recommended.

An example screenshots

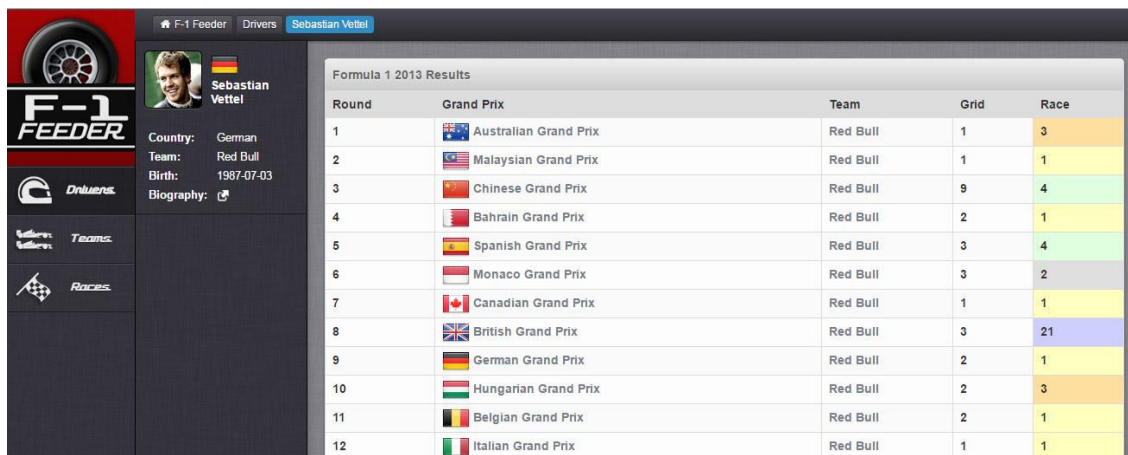
Click on Drivers menu link need to show Drivers Championship page (this is also default page)



The screenshot shows the 'Drivers Championship' page on the F-1 Feeder website. The page features a sidebar with navigation links for Drivers, Teams, and Races. The main content area displays the 'Drivers Championship Standings - 2013' as a table with 11 rows, each representing a driver's position, name, team, and total points.

Rank	Driver	Team	Points
1	Sebastian Vettel	Red Bull	397
2	Fernando Alonso	Ferrari	242
3	Mark Webber	Red Bull	199
4	Lewis Hamilton	Mercedes	189
5	Kimi Räikkönen	Lotus F1	183
6	Nico Rosberg	Mercedes	171
7	Romain Grosjean	Lotus F1	132
8	Felipe Massa	Ferrari	112
9	Jenson Button	McLaren	73
10	Nico Hülkenberg	Sauber	51
11	Sergio Pérez	McLaren	49

If you click on driver name for example Sebastian Vettel yiu need to show all details about this driver for actual session as you can see on page below



The screenshot shows the driver profile page for Sebastian Vettel. The sidebar includes his photo, name, country (German), team (Red Bull), birth date (1987-07-03), and a biography link. The main content area displays 'Formula 1 2013 Results' as a table with 12 rows, each representing a race round, including the grand prix name, team, grid position, and race result.

Round	Grand Prix	Team	Grid	Race
1	Australian Grand Prix	Red Bull	1	3
2	Malaysian Grand Prix	Red Bull	1	1
3	Chinese Grand Prix	Red Bull	9	4
4	Bahrain Grand Prix	Red Bull	2	1
5	Spanish Grand Prix	Red Bull	3	4
6	Monaco Grand Prix	Red Bull	3	2
7	Canadian Grand Prix	Red Bull	1	1
8	British Grand Prix	Red Bull	3	21
9	German Grand Prix	Red Bull	2	1
10	Hungarian Grand Prix	Red Bull	2	3
11	Belgian Grand Prix	Red Bull	2	1
12	Italian Grand Prix	Red Bull	1	1

Click on Teams menu link need to show all about constructors as on page below

Constructors Championship Standings - 2013

1	Red Bull	Details	596
2	Mercedes	Details	360
3	Ferrari	Details	354
4	Lotus F1	Details	315
5	McLaren	Details	122
6	Force India	Details	77
7	Sauber	Details	57
8	Toro Rosso	Details	33
9	Williams	Details	5
10	Marussia	Details	0
11	Caterham	Details	0

If you click Team link for example if you click RedBull links on picture above you need to show all races on which this team was competitioning as you see on picture below


Red Bull

Country: Austrian
Position: 1
Points: 596
History:

Formula 1 2013 Results

Round	Grand Prix	Vettel	Webber	Points
1	Australian Grand Prix	3	6	23
2	Malaysian Grand Prix	1	2	43
3	Chinese Grand Prix	4	20	12
4	Bahrain Grand Prix	1	7	31
5	Spanish Grand Prix	4	5	22
6	Monaco Grand Prix	2	3	33
7	Canadian Grand Prix	1	4	37
8	British Grand Prix	2	21	18
9	German Grand Prix	1	7	31
10	Hungarian Grand Prix	3	4	27
11	Belgian Grand Prix	1	5	35

If you click on details links in Teams menu for example details link for RedBull it need to link you to wikipedia information about this racing team



WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction

Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools

What links here
Related changes
Upload file

Not logged in | Talk | Contributions | Create account | Log in

Article | Talk

Read | Edit | View history

Search Wikipedia

Red Bull Racing

From Wikipedia, the free encyclopedia

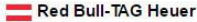
This article is about the Formula One team. For the NASCAR team, see [Red Bull Racing Team](#). For other uses, see [Red Bull Racing \(disambiguation\)](#).

Red Bull Racing is a British [Formula One](#) racing team,^[5] racing under an Austrian licence, and based in [Milton Keynes](#), England. It is one of two F1 teams owned by beverage company [Red Bull GmbH](#), the other being [Scuderia Toro Rosso](#). The team won four successive Constructors' Championship titles, in 2010, 2011, 2012, and 2013, becoming the first Austrian licensed team to win the title.^[6] The team also produced the quadruple world champion driver of 2010, 2011, 2012, and 2013, [Sebastian Vettel](#). Managed by [Christian Horner](#), the team has used [Renault](#) engines since 2007, and had a contract to do so until 2016.^[7] Red Bull Racing then used [TAG Heuer](#)-branded Renault engines starting from the 2016 season.


Contents [hide]

1 History

1.1 Origins



Red Bull-TAG Heuer



Full name Red Bull Racing

Base Milton Keynes, Buckinghamshire, United Kingdom

If you click grand prix link for example Australian Grand Prix it will link to race and qualifying results as you can see on picture below



F-1 FEEDER

[Drivers](#)

[Teams](#)

[Races](#)

Australian Grand Prix

Country: [Australia](#)

Location: [Melbourne](#)

Date: [2013-03-17](#)

Full Report: [📄](#)

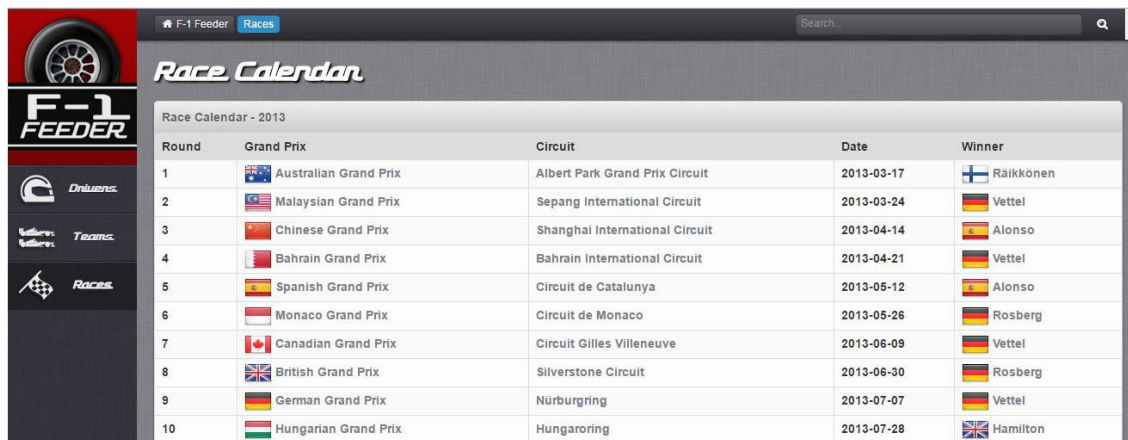
Qualifying Results

Pos	Driver	Team	Best Time
1	Vettel	Red Bull	1:27.407
2	Webber	Red Bull	1:27.827
3	Hamilton	Mercedes	1:28.087
4	Massa	Ferrari	1:28.490
5	Alonso	Ferrari	1:28.493
6	Rosberg	Mercedes	1:28.523
7	Räikkönen	Lotus F1	1:28.738
8	Grosjean	Lotus F1	1:29.013
9	di Resta	Force India	1:29.305
10	Button	McLaren	1:30.357
11	Hülkenberg	Sauber	1:38.067
12	Sutil	Force India	1:38.134

Race Results

Pos	Driver	Team	Result	Points
1	Räikkönen	Lotus F1	1:30:03.225	25
2	Alonso	Ferrari	+12.451	18
3	Vettel	Red Bull	+22.346	15
4	Massa	Ferrari	+33.577	12
5	Hamilton	Mercedes	+45.561	10
6	Webber	Red Bull	+46.800	8
7	Sutil	Force India	+1:05.068	6
8	di Resta	Force India	+1:08.449	4
9	Button	McLaren	+1:21.630	2
10	Grosjean	Lotus F1	+1:22.759	1
11	Pérez	McLaren	+1:23.367	0
12	Vergne	Toro Rosso	+1:23.857	0

Click on Races menu link need to show Race Calendar for actual year



Round	Grand Prix	Circuit	Date	Winner
1	Australian Grand Prix	Albert Park Grand Prix Circuit	2013-03-17	Räikkönen
2	Malaysian Grand Prix	Sepang International Circuit	2013-03-24	Vettel
3	Chinese Grand Prix	Shanghai International Circuit	2013-04-14	Alonso
4	Bahrain Grand Prix	Bahrain International Circuit	2013-04-21	Vettel
5	Spanish Grand Prix	Circuit de Catalunya	2013-05-12	Alonso
6	Monaco Grand Prix	Circuit de Monaco	2013-05-26	Rosberg
7	Canadian Grand Prix	Circuit Gilles Villeneuve	2013-06-09	Vettel
8	British Grand Prix	Silverstone Circuit	2013-06-30	Rosberg
9	German Grand Prix	Nürburgring	2013-07-07	Vettel
10	Hungarian Grand Prix	Hungaroring	2013-07-28	Hamilton

All other links lead to same links mention above.

All API for this task can be found on :

<http://ergast.com/mrd/>

Here are detailed API for this project :

AllDrivers : 'http://ergast.com/api/f1/' + year + '/driverStandings.json'

DriverDetails :

'http://ergast.com/api/f1/' + year + '/drivers/' + id + '/driverStandings.json'

DriverRaces : 'http://ergast.com/api/f1/' + year + '/drivers/' + id + '/results.json'

AllTeams : 'http://ergast.com/api/f1/' + year + '/constructorStandings.json'

TeamDetails : 'http://ergast.com/api/f1/' + year + '/constructors/' + id + '/constructorStandings.json'

TeamResults

: 'http://ergast.com/api/f1/' + year + '/constructors/' + id + '/results.json'

AllRaces : 'http://ergast.com/api/f1/' + year + '/results/1.json'

Qualifiers : 'http://ergast.com/api/f1/' + year + '/' + id + '/qualifying.json'

Results : 'http://ergast.com/api/f1/' + year + '/' + id + '/results.json'

For additional task implement different colors for displayed position place after race.

Points awarded for finishing	
Position	colors
1st	Yellow
2nd	Gray
3rd	Orange
4th	Light green
5th	Light blue
6th	Your choice
7th	Your choice
8th	Your choice
9th	Your choice
10th	Your choice

All other position make dark grey

3. You will learn:

This practice covers methods for organizing your code, both conceptually and literally. You'll learn the importance of separating concerns when writing JavaScript, gaining hands-on experience along the way. Separating concerns can be done with or without an organizational library or framework. We'll learn how to separate concerns with a framework. You'll also learn strategies for exploring other libraries and frameworks on your own.

- You will learn different JavaScript frameworks
- You will learn essential abstractions of AngularJS, including modules, controllers, directives, and services

By the end of this course, you'll understand (from experience) the importance of code organization, and how to implement it with either vanilla JavaScript or an organizational library or framework. Your applications will start looking clean and professional—not just to your users, but also to anyone who looks at the code driving your applications.

4. Prerequisites:

This course is for intermediate web developers with some experience with JavaScript, and some prior experience with a JavaScript library, such as jQuery.

Students should also be proficient in HTML and CSS, and should have experience creating static pages.

Estimated duration: 2 week in group

Useful learning sources:

<https://www.pluralsight.com> - playlist **Front-End Developer - Project 4**

<http://ergast.com/mrd/>

<http://www.learn-angular.org/>

<http://www.w3schools.com/angular/>

<https://angular.io/docs/ts/latest/quickstart.html>