1. **Your First NumPy Array**

In this chapter, we're going to dive into the world of baseball. Along the way, you'll get comfortable with the basics of numpy, a powerful package to do data science.

A list baseball has already been defined in the Python script, representing the height of some baseball players in centimeters. Can you add some code here and there to create a numpy array from it?

* Import the numpy package as np, so that you can refer to numpy with np.
* Use **[np.array()](http://docs.scipy.org/doc/numpy-1.10.0/glossary.html" \l "term-array" \t "_blank)** to create a numpy array from baseball. Name this array np\_baseball.
* Print out the type of np\_baseball to check that you got it right.

# Baseball players' height

You are a huge baseball fan. You decide to call the MLB (Major League Baseball) and ask around for some more statistics on the height of the main players. They pass along data on more than a thousand players, which is stored as a regular Python list: height. The height is expressed in inches. Can you make a numpy array out of it and convert the units to meters?

height is already available and the numpy package is loaded, so you can start straight away (Source: [**stat.ucla.edu**](http://wiki.stat.ucla.edu/socr/index.php/SOCR_Data_MLB_HeightsWeights)).

* Create a numpy array from height. Name this new array np\_height.
* Print np\_height.
* Multiply np\_height with 0.0254 to convert all height measurements from inches to meters. Store the new values in a new array, np\_height\_m.
* Print out np\_height\_m and check if the output makes sense.

# Baseball player's BMI

The MLB also offers to let you analyze their weight data. Again, both are available as regular Python lists: height and weight. height is in inches and weight is in pounds.

It's now possible to calculate the BMI of each baseball player. Python code to convert height to a numpy array with the correct units is already available in the workspace. Follow the instructions step by step and finish the game!

* Create a numpy array from the weight list with the correct units. Multiply by 0.453592 to go from pounds to kilograms. Store the resulting numpy array as np\_weight\_kg.
* Use np\_height\_m and np\_weight\_kg to calculate the BMI of each player. Use the following equation:

BMI=weight(kg)height(m)2BMI=weight(kg)height(m)2

Save the resulting numpy array as bmi.

* Print out bmi.