

						$\mathbf{S}$	Swinging Strike
						В	Ball
						$\mathbf{F}$	Foul Ball
						$\mathbf{L}$	Foul Bunt
						$\mathbf{M}$	Missed Bunt
1	Catcher	(none)	Out			P	Pitchout
2	Pitcher	$\mathbf{S}$	Single			Q	Pitchout (strike)
3	First Base	D	Double			$\mathbf{R}$	Pitchout (foul)
4	Second Base	${ m T}$	Triple			I	Int. Ball
5	Third Base	$_{ m HR}$	Home Run	G	Ground Ball	Η	Hit by pitch
6	Shortstop	$_{ m HP}$	Hit by pitch	L	Line Drive	K	Strike (unknown)
7	Left Field	W	Walk	Ρ	Pop Fly	U	Unknown
8	Center Field	IW	Int. Walk	$\mathbf{F}$	Fly Ball	$\mathrm{n}^1$	Pickoff
9	Right Field	WP	Wild Pitch	В	Prefix indicating bunt	$+n^2$	Pickoff by catcher
(a) Positions		(b) Play Type			(c) Description		(d) Pitches

 $<sup>^{1}{\</sup>rm n}$  is 1, 2, or 3, corresponding to base thrown to. This should not be confused with player number.  $^{2}{\rm See}$  above

## Sample Records

$$start, \underbrace{grudm001}, \underbrace{MarkGrudzielanek}^{\text{Player Name}}, \underbrace{0}, \underbrace{1}, \underbrace{0}, \underbrace{1}, \underbrace{6}, \underbrace{6}$$

$$play, \underbrace{1,0}, \underbrace{aaroh101}, \underbrace{12}, \underbrace{BF1CX}, \underbrace{S}, \underbrace{7} / \underbrace{L7S}, \underbrace{3-H;1-2}_{\text{Play Type Location}}, \underbrace{0}_{\text{Description}}, \underbrace{0}_{\text{Rupper movement}}$$

- **Hadoop** A platform for storage and processing of large data sets. Hadoop consists of a distributed filesystem, Java interfaces, and services for managing distribution of tasks. Core code is maintained by the Apache Software Foundation.
- MapR distribution for Hadooop MapR provides an enterprise-ready distribution for Hadoop including the core open source components as well as a high-performance distributed filesystem, high-availability services, and easy-to-use management interface.
- **MapReduce** A programming model for parallel processing, introduced in Google's 2004 paper<sup>3</sup>. Hadoop provides a framework for running MapReduce jobs written in Java.
- **Pig** A high level data flow language for processing data. Pig programs describe steps to be executed on sets of tuples, and are executed by running one or more MapReduce jobs.
- **Hive** A framework for executing SQL-like queries on large data sets. The queries are executed as MapReduce jobs.

<sup>&</sup>lt;sup>3</sup>http://research.google.com/archive/mapreduce.html