Creating list and tables

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Resumen

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1. Introducción

A. Acrónimos[1]

Los acrónimos actuales[2] de todos los equipos se presentan a continuación:

- American League Central:

    - Chicago White Sox
    - Detroit Tigers
    - Kansas City Royals
    - Minnesota Twins

- National League Central:

    - Baltimore Orioles
    - Boston Red Sox
    - New York Yankees
    - Tampa Bay Rays
    - Toronto Blue Jays

- American League East:

    - Houston Astros
    - Los Angeles Angels
    - Oakland Athletics
    - Seattle Mariners

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[1] https://www.baseball-reference.com/about/team$_I$Ds.shtml
[2] https://www.espn.com/mlb/teams

- Texas Rangers

- National League East:

  - Chicago Cubs
  - Cincinnati Reds
  - Milwaukee Brewers
  - Pittsburgh Pirates
  - St. Louis Cardinals

- American League West:

  - Atlanta Braves
  - Miami Marlins
  - New York Mets
  - Philadelphia Phillies
  - Washington Nationals

- National League West:

  - Arizona Diamondbacks
  - Colorado Rockies
  - Los Angeles Dodgers
  - San Diego Padres
  - San Francisco Giants

B.   Medidas de desempeño

En este apartado se explica el significado de cada una de las medidas de desempeño[3] contenidas en las bases de datos tanto de los *pitchers* como de los *bateadores*. De manera general: For more than a century, statistics have been a staple of the game of baseball. Arguably no sport has a closer relationship with the stats that chronicle its every play. Standard stats are widely used by those who play fantasy baseball. A typical fantasy baseball league will use the following statistics:

- For Hitters:

  1. Batting Average
  2. Home Runs
  3. RBIs

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[3]Las definiciones se obtuvieron del glosario oficial de la MLB: https://www.mlb.com/glossary

4. Runs Scored

5. Stolen Bases

- For Pitchers:

  1. Wins

  2. ERA

  3. WHIP

  4. Strikeouts

  5. Saves

B.1. Pitchers

- **GP**: Games played - A player is credited with having played a game if he appears in it at any point – be it as a starter or a replacement. It's important to note that the player doesn't necessarily need an at-bat. He can also enter for defense or as a pinch-runner. Typically, if a player records 162 games played, it means that he appeared in every game that season. But there have been instances in the past where players have exceeded that number – either because they were traded during the season or because they played in a tiebreaker game at the end of the season.

- **GS**: Games started - A pitcher is credited with a game started if he is the first pitcher to throw a pitch for his team in a given game. A starter who pitches a full season in a five-man rotation will generally tally at most 34 games started. There is no minimum innings plateau for a pitcher to earn a game started, but a starter must pitch at least five innings to be eligible for a win. Beginning in 2018, teams started experimenting with the idea of using an .ºpener."Much like a closer, the opener is responsible only for an inning (sometimes two). The opener generally gives way to a reliever in the second or third inning. The prevailing wisdom behind an opener is that it's better for a quality reliever to face the top of the order early in a game than a team's fourth-best or fifth-best starting option. It can also be beneficial to have a right-handed opener face an all-right-handed top of the order or a left-handed opener face multiple imposing lefties. Openers are credited with games started and generally have the opportunity to make more starts than a traditional starting pitcher would over the course of a full season.

- **IP**: Inning pitched - Innings pitched measures the number of innings a pitcher remains in a game. Because there are three outs in an inning, each out recorded represents one-third of an inning pitched. Just because a pitcher appears in a game, doesn't mean he will record an inning pitched or even a third of an inning pitched. In order for a pitcher's IP total to increase, he must be pitching while an out is recorded. (This includes pickoffs and caught stealings, while double plays are worth two-thirds of an

inning pitched.) Pitchers are not credited for a third of an inning pitched if a batter reaches on an error because an out was never recorded.

- **H**: Hits - A hit occurs when a batter strikes the baseball into fair territory and reaches base without doing so via an error or a fielder's choice. There are four types of hits in baseball: singles, doubles, triples and home runs. All four are counted equally when deciphering batting average. If a player is thrown out attempting to take an extra base (e.g., turning a single into a double), that still counts as a hit. Hits come in all varieties. Some can be hard-hit balls or long home runs. Others can be slow bouncers in the infield – or even bunts – where the batter reaches first base before the throw. (These are called ïnfield hits.") Hits are also credited to the batter when the ball takes an awkward bounce that a defender cannot field (provided the scorer rules that the batter didn't reach base with the help of an error). The league leader in hits is often a batter with speed who:

  - Hits high in the batting order – meaning he gets a high number of plate appearances.
  - Doesn't walk much.
  - Makes a lot of hard contact.

  Hits are a pivotal part of many statistics, such as batting average, batting average against, WHIP and H/9.

- **HBP**: Hit by pitch: A hit-by-pitch occurs when a batter is struck by a pitched ball without swinging at it. He is awarded first base as a result. Strikes supersede hit-by-pitches, meaning if the umpire rules that the pitch was in the strike zone or that the batter swung, the HBP is nullified. A batter is awarded a hit-by-pitch, even if the ball only touches a portion of his uniform or protection (helmet, shin guard, etc.). Most hit-by-pitches are unintentional. They often stem from pitchers trying to throw the ball inside but missing by a few inches. Pitchers will often throw inside to make the hitter wary, so they do not crowd the plate. However, a pitcher may sometimes throw at a hitter intentionally as a form of retaliation. If the home-plate umpire suspects this is the case, he has the right to eject the pitcher (and the manager of the pitching team) from the game. A hit-by-pitch does not count as a hit, but it does count as a time on base for on-base percentage purposes. Certain hitters – specifically those who stand very close to the plate – have a knack for earning HBPs, which can obviously be helpful because the goal of any hitter is to reach base. But hit-by-pitches can also result in injury because most pitches are thrown 80 mph or faster. Per the rules, a batter must make an attempt to avoid being hit by a pitch in order to receive first base. Pitchers with high HBP totals typically struggle with their control and will also walk a higher-than-normal number of hitters.

- **R**: Runs - In baseball, a run is scored when a player advances around first, second and third base and returns safely to home plate, touching the bases in that order, before three outs are recorded and all obligations to reach base safely on batted balls are met or assured. A player may score by hitting a home run or by any combination of plays that puts him safely .ºn base"(that is, on first, second, or third) as a runner and subsequently brings him home. The object of the game is for a team to score more runs than its opponent. The Official Baseball Rules hold that if the third out of an inning is a force out of a runner advancing to any base then, even if another baserunner crosses home plate before that force out is made, his run does not count. However, if the third out is not a force out, but a tag out, then if that other baserunner crosses home plate before that tag out is made, his run will count. In baseball statistics, a player who advances around all the bases to score is credited with a run (R), sometimes referred to as a run scored". While runs scored is considered an important individual batting statistic, it is regarded as less significant than runs batted in (RBIs). Both individual runs scored and runs batted in are heavily context-dependent; however, the sabermetric statistic runs created provides a more sophisticated assessment of a player's contribution toward producing runs for his team.

- **ER**: Earned runs - An earned run is any run that scores against a pitcher without the benefit of an error or a passed ball. Often, it is the judgment of the official scorer as to whether a specific run would've scored without the defensive mishap. If a pitcher exits a game with runners on base, any earned runs scored by those runners will count against him. Earned runs is the key counting statistic used in ERA, the most widely accepted barometer of a pitcher's success. If there are no errors or passed balls in a given inning or game, all the runs in that inning or game are earned runs.

- **BB**: Walks - A base on balls (BB), also known as a walk, occurs in baseball when a batter receives four pitches that the umpire calls balls, and is in turn awarded first base without the possibility of being called out. The base on balls is defined in Section 2.00 of baseball's Official Rules, and further detail is given in 6.08(a). It is considered a faux pas for a professional player to literally walk to first base; the batter-runner and any advancing runners normally jog on such a play. The term "base on balls"distinguishes a walk from the other manners in which a batter can be awarded first base without liability to be put out (e.g., hit by pitch (HBP), catcher's interference).Though a base on balls, catcher's interference, or a batter hit by a pitched ball all result in the batter (and possibly runners on base) being awarded a base, the term "walküsually refers only to a base on balls, and not the other methods of reaching base without the bat touching the ball. An important difference is that for a hit batter or catcher's interference, the ball is dead and no one may advance unless forced; the ball is live after a walk (see below for details). A batter who draws a base on balls is commonly said to have been "walked"by the

pitcher. When the batter is walked, runners advance one base without liability to be put out only if forced to vacate their base to allow the batter to take first base. If a batter draws a walk with the bases loaded, all preceding runners are forced to advance, including the runner on third base who is forced to home plate to score a run; when a run is forced on a walk, the batter is credited with an RBI per rule 9.04.

- **SO**: Strikeouts - A strikeout occurs when a pitcher throws any combination of three swinging or looking strikes to a hitter. (A foul ball counts as a strike, but it cannot be the third and final strike of the at-bat. A foul tip, which is caught by the catcher, is considered a third strike.) The batter is automatically out on a strikeout, unless the catcher does not cleanly hold onto the baseball or if the baseball hits the dirt. If the catcher does not catch the third strike, the batter may attempt to run to first base – if it is open or if there are two outs. However, even if the batter reaches first base safely, the pitcher and the batter are still credited with a strikeout in the scorebook. In the scorebook, a strikeout is denoted by the letter K. A third-strike call on which the batter doesn't swing is denoted with a backward K.

- **W**: Wins - A pitcher receives a win when he is the pitcher of record when his team takes the lead for good – with a couple rare exceptions. First, a starting pitcher must pitch at least five innings (in a traditional game of nine innings or longer) to qualify for the win. If he does not, the official scorer awards the win to the most effective relief pitcher. There is also a rarely used clause where an official scorer can deem a relief pitcher's appearance "brief and ineffective."(For example, if a reliever relinquished a one-run lead by allowing three runs, but was still in line for a win after his team scored four runs in the following inning – that may qualify.) If that's the case, the scorer can award the win to a pitcher who followed that "brief and ineffective"pitcher. Which relief pitcher earns the win specifically is also up to the judgment of the official scorer.

- **L**: Losses - A pitcher receives a loss when a run that is charged to him proves to be the go-ahead run in the game, giving the opposing team a lead it never gives up. Losses are almost always paired with wins when used to evaluate a pitcher, creating a separate pitching term known as win-loss record. Win-loss record took on a greater importance in the past for a different reason. In the time when pitchers routinely pitched complete games, bullpens were rarely at fault for losses. But today's specialization of relief pitchers has led to starters pitching fewer innings. A starting pitcher does not necessarily receive a loss every time his team loses – even if he exits the game with his team trailing. In such instances, if his team ties the game or takes the lead before eventually losing, it will be the pitcher who put the go-ahead run on base who takes the loss.

- **SV**: Saves - A save is awarded to the relief pitcher who finishes a game for the winning team, under certain circumstances. A pitcher cannot receive

a save and a win in the same game. A relief pitcher recording a save must preserve his team's lead while doing one of the following:

- Enter the game with a lead of no more than three runs and pitch at least one inning.
- Enter the game with the tying run in the on-deck circle, at the plate or on the bases.

Pitch at least three innings.

- **WHIP**: WHIP - WHIP is one of the most commonly used statistics for evaluating a pitcher's performance. The statistic shows how well a pitcher has kept runners off the basepaths, one of his main goals. The formula is simple enough – it's the sum of a pitcher's walks and hits, divided by his total innings pitched. The pitchers with the lowest WHIPs are generally the best pitchers in the league – which makes sense, because the best pitchers should be able to prevent baserunners. However, WHIP does not consider the way in which a hitter reached base. (Obviously, home runs are more harmful to pitchers than walks.) Hit batsmen, errors and hitters who reach via fielder's choice do not count against a pitcher's WHIP.

- **ERA**: Earned runs average - Earned run average represents the number of earned runs a pitcher allows per nine innings – with earned runs being any runs that scored without the aid of an error or a passed ball. ERA is the most commonly accepted statistical tool for evaluating pitchers. The formula for finding ERA is: 9 x earned runs / innings pitched. If a pitcher exits a game with runners on base, any earned runs scored by those runners will count against him. ERA should be an ideal evaluation of pitchers. The goal of pitching is to prevent runs from scoring, and ERA tells us basically how well a pitcher does that. How many runs does he allow, on average, that are his fault in a given game? But there are a few flaws with ERA, because so many different factors can affect it. While defensive mistakes are taken into account, great defensive plays are not. So a pitcher with an average defense is at a disadvantage to a pitcher with a great defense. It's also hard to evaluate ERA across the two leagues in Major League Baseball, because the absence of a designated hitter in the National League tends to keep pitchers' ERAs lower. Even the ballpark in which a pitcher pitches can affect a pitcher's ERA because certain stadiums are more conducive to run scoring. Still, ERA is a useful tool for measuring a starting pitcher's success. However, it's not quite as effective in measuring relief pitchers, who often pitch only fractions of an inning – sometimes leaving their ERA in the hands of other relievers. Even relief pitchers who pitch a full inning tend to exert all their energy on those three outs, instead of spreading it out over the course of a game. This means relievers generally have lower ERAs than starting pitchers.

B.2. Pitchers

- **GP**: Juegos jugados - A player is credited with having played a game if he appears in it at any point – be it as a starter or a replacement. It's important to note that the player doesn't necessarily need an at-bat. He can also enter for defense or as a pinch-runner. Typically, if a player records 162 games played, it means that he appeared in every game that season. But there have been instances in the past where players have exceeded that number – either because they were traded during the season or because they played in a tiebreaker game at the end of the season.

- **GP** %: Porcentage de juegos jugados -

- **AB**: *At bats* - An official at-bat comes when a batter reaches base via a fielder's choice, hit or an error (not including catcher's interference) or when a batter is put out on a non-sacrifice. (Whereas a plate appearance refers to each completed turn batting, regardless of the result.) At-bats are used as the denominator when determining batting average and slugging percentage. Players who bat higher in the order will typically finish the season with more at-bats than players who hit toward the bottom. Similarly, players who walk infrequently also typically record a higher-than-usual number of at-bats in a season, because walks do not count as at-bats.

- **H**: Bateos - A hit occurs when a batter strikes the baseball into fair territory and reaches base without doing so via an error or a fielder's choice. There are four types of hits in baseball: singles, doubles, triples and home runs. All four are counted equally when deciphering batting average. If a player is thrown out attempting to take an extra base (e.g., turning a single into a double), that still counts as a hit. Hits come in all varieties. Some can be hard-hit balls or long home runs. Others can be slow bouncers in the infield – or even bunts – where the batter reaches first base before the throw. (These are called ïnfield hits.") Hits are also credited to the batter when the ball takes an awkward bounce that a defender cannot field (provided the scorer rules that the batter didn't reach base with the help of an error). The league leader in hits is often a batter with speed who:

  - Hits high in the batting order – meaning he gets a high number of plate appearances.
  - Doesn't walk much.
  - Makes a lot of hard contact.

Hits are a pivotal part of many statistics, such as batting average, batting average against, WHIP and H/9.

- **HR**: *Home runs* - A home run occurs when a batter hits a fair ball and scores on the play without being put out or without the benefit of an

error. In almost every instance of a home run, a batter hits the ball in the air over the outfield fence in fair territory. In that situation, the batter is awarded all four bases, and any runners on base score as well. The batter can circle the bases at his leisure, as there is no threat of him being thrown out. (This also occurs when the ball hits the foul pole in left or right field, or when the ball hits an opposing defender on the fly and bounces directly over the wall in fair ground.) There are also instances of ïnside-the-park home runs."These occur when the batter hits the ball in play (not over the wall) and touches all four bases without being thrown out. These are extremely rare and typically only occur with a very fast runner at the plate and some sort of misplay by an outfielder that doesn't qualify as an error. Home runs can be a great stat for evaluating a hitter's power. They're also good for measuring the success of pitchers, who strive to limit home runs. But home run totals can be affected by the ballpark in which a game is being played. Some ballparks are smaller, have higher walls or have different wind currents. This means home runs in certain ballparks might have stayed in the yard in others.

- **RBI**: *Runs batted in* - A batter is credited with an RBI in most cases where the result of his plate appearance is a run being scored. There are a few exceptions, however. A player does not receive an RBI when the run scores as a result of an error or ground into double play. The most common examples of RBIs are run-scoring hits. However, players also receive an RBI for a bases-loaded walk or hit by pitch. Players can earn RBIs when they make outs, as well, provided the out results in a run or runs (except, as noted above, in the case of double plays). Along with home runs and batting average, RBIs are a part of baseball's offensive Triple Crown.

- **AVG**: Porcentage de bateo - One of the oldest and most universal tools to measure a hitter's success at the plate, batting average is determined by dividing a player's hits by his total at-bats for a number between zero (shown as .000) and one (1.000). In recent years, the league-wide batting average has typically hovered around .250. While batting average is a useful tool for measuring a player's ability at the plate, it isn't all-encompassing. For instance, batting average doesn't take into account the number of times a batter reaches base via walks or hit-by-pitches. And it doesn't take into account hit type (with a double, triple or home run being more valuable than a single). Batting average can also be applied in evaluating pitchers. In this case, it is called either .ºpponents' batting average.ºr "batting average against,.ªnd it is determined by dividing the number of hits against a given pitcher by the number of at-bats against him. BAA is very common in evaluating pitchers – especially when assessing opponent handed-ness splits. A pitcher cannot have an ERA against left-handed hitters because they are interspersed with righties in lineups. So when a pitcher's ability against hitters from each side of the plate is being compared, it is usually done by using either BAA or OPS-against.

- **OPS**: Porcentaje del *Onebase plus slugging* - OPS adds on-base percentage and slugging percentage to get one number that unites the two. It's meant to combine how well a hitter can reach base, with how well he can hit for average and for power.

C.   Pesos de las medidas de desempeño

Los pesos asignados de acuerdo al criterio especificado son los siguientes:

Medida de desempeño	Peso
asd	3

Cuadro 1: Pesos de las medidas de desempeño de los bateadores.