

Professor Bear :: XML in R

Bear

What is XML?

[Extensible Markup Language \(XML\)](#) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

```
<?xml version="1.0"?>
<quiz>
  <qanda seq="1">
    <question>
      Who was the forty-second
      president of the U.S.A.?
    </question>
    <answer>
      William Jefferson Clinton
    </answer>
  </qanda>
  <!-- Note: We need to add
  more questions later.-->
</quiz>
```

The logo consists of the letters "XML" in a bold, white, sans-serif font, centered within an orange rectangular box with a slight 3D effect.

XML terminology

Character - An XML document is a string of characters. Almost every legal Unicode character may appear in an XML document.

* **Processor and application** - The processor analyzes the markup and passes structured information to an application. The specification places requirements on what an XML processor must do and not do, but the application is outside its scope. The **processor** (as the specification calls it) is often referred to colloquially as an XML parser.

* **Markup and content**- The characters making up an XML document are divided into markup and content, which may be distinguished by the application of simple syntactic rules. Generally, strings that constitute markup either begin with the character < and end with a >, or they begin with the character & and end with a ;. Strings of characters that are not markup are content. However, in a CDATA section, the delimiters <![CDATA[and]]> are classified as markup, while the text between them is classified as content. In addition, whitespace before and after the outermost element is classified as markup.

* **Tag** - A tag is a markup construct that begins with < and ends with >. Tags come in three flavors:
start-tag, such as <section>;
end-tag, such as </section>;
empty-element tag, such as <line-break />.

* **Element** - An element is a logical document component that either begins with a start-tag and ends with a matching end-tag or consists only of an empty-element tag. The characters between the start-tag and end-tag, if any, are the element's content, and may contain markup, including other elements, which are called child elements. An example is <greeting>Hello, world!</greeting>. Another is <line-break />.

* **Attribute** - An attribute is a markup construct consisting of a name-value pair that exists within a start-tag or empty-element tag. An example is , where the name of the attributes are "src" and "alt" and their values are "bear.jpg" and "bear" respectively. Another example is <step number="3">Connect A to B.</step>, where the name of the attribute is "number" and its value is "3". An XML attribute can only have a single value and each attribute can appear at most once on each element. In the common situation where a list of multiple values is desired, this must be done by encoding the list into a well-formed XML attribute[[note 1](#)] with some format beyond what XML defines itself. Usually this is either a comma or semi-colon delimited list or, if the individual values are known not to contain spaces,[[note 2](#)] a space-delimited list can be used. <div class="inner greeting-box">Welcome!</div>, where the attribute "class" has both the

value "inner greeting-box" and also indicates the two CSS class names "inner" and "greeting-box".

* XML declaration - XML documents may begin with an XML declaration that describes some information about themselves. An example is `<?xml version="1.0" encoding="UTF-8"?>`.

Additional packages needed

To run the code in you may need additional packages.

- If necessary install the following package(s).

```
install.packages("XML");
```

```
library(XML)
```

MLB XML data

[mlb.com](http://gd2.mlb.com/components/game/mlb/) stores statistical data from baseball games on <http://gd2.mlb.com/components/game/mlb/> in an XML format.

Let's parse the master scorebord for 09/10/2016

http://gd2.mlb.com/components/game/mlb/year_2016/month_09/day_10/master_scoreboard.xml

```
xml.url <-  
"http://gd2.mlb.com/components/game/mlb/year_2016/month_09/day_10/maste  
r_scoreboard.xml"  
# Use the xmlTreeParse-function to parse xml file directly from the web  
mlb.xml <- xmlTreeParse(xml.url)  
class(mlb.xml)  
  
## [1] "XMLDocument"          "XMLAbstractDocument"  
  
xmltop = xmlRoot(mlb.xml) #gives content of root  
class(xmltop) # "XMLInternalElementNode" "XMLInternalNode"  
"XMLAbstractNode"  
  
## [1] "XMLNode"              "RXMLAbstractNode" "XMLAbstractNode"  
## [4] "oldClass"  
  
print(xmltop)[1]  
  
## <games year="2016" month="09" day="10" modified_date="2017-02-  
24T15:22:15Z" next_day_date="2016-09-11">  
## <game id="2016/09/10/bosmlb-tormlb-1" venue="Rogers Centre"  
game_pk="448977" time="1:05" time_date="2016/09/10 1:05"  
time_date_aw_lg="2016/09/10 1:05" time_date_hm_lg="2016/09/10 1:05"  
time_zone="ET" ampm="PM" first_pitch_et="" away_time="1:05"  
away_time_zone="ET" away_ampm="PM" home_time="1:05" home_time_zone="ET"  
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
```

```

original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="1:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="1:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="14" scheduled_innings="9"
description="" away_name_abbrev="BOS" home_name_abbrev="TOR"
away_code="bos" away_file_code="bos" away_team_id="111"
away_team_city="Boston" away_team_name="Red Sox" away_division="E"
away_league_id="103" away_sport_code="mlb" home_code="tor"
home_file_code="tor" home_team_id="141" home_team_city="Toronto"
home_team_name="Blue Jays" home_division="E" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="4.0"
away_games_back_wildcard="" home_games_back_wildcard="-"
venue_w_chan_loc="CAXX0504" location="Toronto, Canada"
gameday="2016_09_10_bosmlb_tormlb_1" away_win="79" away_loss="62"
home_win="78" home_loss="63"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_bosmlb_tormlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="2"/>
## <inning away="0" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="1" home="0"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0"/>
## <r away="2" home="3" diff="1"/>
## <h away="4" home="6"/>
## <e away="1" home="1"/>
## <hr away="1" home="1"/>
## <sb away="1" home="1"/>
## <so away="8" home="8"/>
## </linescore>
## <home_runs>
## <player id="425834" last="Upton" first="Melvin"
name_display_roster="Upton Jr." number="7" hr="1" std_hr="20"
inning="2" runners="1" team_code="tor"/>
## <player id="456030" last="Pedroia" first="Dustin"
name_display_roster="Pedroia" number="15" hr="1" std_hr="13" inning="6"
runners="0" team_code="bos"/>
## </home_runs>
## <winning_pitcher id="457918" last="Happ" first="J.A."
name_display_roster="Happ" number="33" era="3.33" wins="18"
losses="4"/>
## <losing_pitcher id="593958" last="Rodriguez" first="Eduardo"
name_display_roster="Rodriguez, E" number="52" era="4.70" wins="2"

```

```

losses="7"/>
##   <save_pitcher id="532077" last="Osuna" first="Roberto" number="54"
name_display_roster="Osuna" era="2.36" wins="2" losses="2" saves="31"
svo="34"/>
##   <links mlbtv="bam.media.launchPlayer({calendar_event_id:&apos;14-
448977-2016-09-10&apos;;media_type:&apos;video&apos;})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&amp;mode=
wrap&amp;c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448977-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
away_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448977-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&amp
;mode=preview&amp;c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&amp
;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="FOX"/>
##   <broadcast>
##     <home>
##       <tv>FOX</tv>
##       <radio>SN590</radio>
##     </home>
##     <away>
##       <tv>FOX</tv>
##       <radio>WEEI 93.7, WCCM 1110 AM</radio>
##     </away>
##   </broadcast>
##   <game_media>
##     <media type="game" calendar_event_id="14-448977-2016-09-10"
start="2016-09-10T13:05:00-0400" title="BOS @ TOR" has_mlbtv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/bostor_448977_th
_7_preview.jpg"/>
##     <media type="vpp" content_id="1154983783" topic_id=""
headline="Upton Jr.&apos;s two-run home run"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/10/images/mlbf_1
154983783_th_43.jpg"/>
##   </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/bostor_448
977_th_7_preview.jpg</video_thumbnail>
##   <video_thumbnails>
##     <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/bostor_448977_t
h_7_preview.jpg</thumbnail>
##     <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/bostor_448977_t
h_37_preview.jpg</thumbnail>
##   </video_thumbnails>

```

```

## </game>
## <game id="2016/09/10/chnmlb-houmlb-1" venue="Minute Maid Park"
game_pk="448978" time="1:05" time_date="2016/09/10 1:05"
time_date_aw_lg="2016/09/10 1:05" time_date_hm_lg="2016/09/10 1:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="12:05"
away_time_zone="CT" away_ampm="PM" home_time="12:05"
home_time_zone="CT" home_ampm="PM" game_type="R" tiebreaker_sw="N"
resume_date="" original_date="2016/09/10" time_zone_aw_lg="-4"
time_zone_hm_lg="-4" time_aw_lg="1:05" aw_lg_ampm="PM"
tz_aw_lg_gen="ET" time_hm_lg="1:05" hm_lg_ampm="PM" tz_hm_lg_gen="ET"
venue_id="2392" scheduled_innings="9" description=""
away_name_abbrev="CHC" home_name_abbrev="HOU" away_code="chn"
away_file_code="chc" away_team_id="112" away_team_city="Chi Cubs"
away_team_name="Cubs" away_division="C" away_league_id="104"
away_sport_code="mlb" home_code="hou" home_file_code="hou"
home_team_id="117" home_team_city="Houston" home_team_name="Astros"
home_division="W" home_league_id="103" home_sport_code="mlb" day="SAT"
gameday_sw="P" double_header_sw="N" game_nbr="1" tbd_flag="N"
away_games_back="-" home_games_back="11.0" away_games_back_wildcard=""
home_games_back_wildcard="5.0" venue_w_chan_loc="USTX0617"
location="Houston, TX" gameday="2016_09_10_chnmlb_houmlb_1"
away_win="90" away_loss="51" home_win="75" home_loss="67"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_chnmlb_houmlb_1" league="NA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="2"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0"/>
## <r away="1" home="2" diff="1"/>
## <h away="2" home="5"/>
## <e away="1" home="1"/>
## <hr away="0" home="1"/>
## <sb away="1" home="0"/>
## <so away="8" home="12"/>
## </linescore>
## <home_runs>
## <player id="608324" last="Bregman" first="Alex"
name_display_roster="Bregman" number="2" hr="1" std_hr="8" inning="3"
runners="0" team_code="hou"/>
## </home_runs>
## <winning_pitcher id="543521" last="McHugh" first="Collin"

```

```

name_display_roster="McHugh" number="31" era="4.86" wins="10"
losses="10"/>
## <losing_pitcher id="407793" last="Lackey" first="John"
name_display_roster="Lackey" number="41" era="3.35" wins="9"
losses="8"/>
## <save_pitcher id="571704" last="Giles" first="Ken" number="53"
name_display_roster="Giles" era="3.51" wins="2" losses="3" saves="10"
svo="13"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:&apos;14-
448978-2016-09-10&apos;;media_type:&apos;video&apos;})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&amp;mode=
wrap&amp;c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448978-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
away_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448978-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&amp
;mode=preview&amp;c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&amp
;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="FOX"/>
## <broadcast>
## <home>
## <tv>FOX</tv>
## <radio>KBME 790, La Nueva 94.1 FM</radio>
## </home>
## <away>
## <tv>FOX</tv>
## <radio>670 The Score</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448978-2016-09-10"
start="2016-09-10T13:05:00-0400" title="CHC @ HOU" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_th
_7_preview.jpg"/>
## <media type="vpp" content_id="1155125783" topic_id=""
headline="Giles nails down the save"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
155125783_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/chnhou_448
978_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_t
h_7_preview.jpg</thumbnail>

```

```
##    <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_t
h_37_preview.jpg</thumbnail>
##    </video_thumbnails>
##    </game>
##    <game id="2016/09/10/seamlb-oakmlb-1" venue="Oakland Coliseum"
game_pk="448988" time="4:05" time_date="2016/09/10 4:05"
time_date_aw_lg="2016/09/10 4:05" time_date_hm_lg="2016/09/10 4:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="1:05"
away_time_zone="PT" away_ampm="PM" home_time="1:05" home_time_zone="PT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="4:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="4:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="10" scheduled_innings="9"
description="" away_name_abbrev="SEA" home_name_abbrev="OAK"
away_code="sea" away_file_code="sea" away_team_id="136"
away_team_city="Seattle" away_team_name="Mariners" away_division="W"
away_league_id="103" away_sport_code="mlb" home_code="oak"
home_file_code="oak" home_team_id="133" home_team_city="Oakland"
home_team_name="Athletics" home_division="W" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="9.0" home_games_back="26.0"
away_games_back_wildcard="3.0" home_games_back_wildcard="20.0"
venue_w_chan_loc="USCA0791" location="Oakland, CA"
gameday="2016_09_10_seamlb_oakmlb_1" away_win="74" away_loss="68"
home_win="60" home_loss="81"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_seamlb_oakmlb_1" league="AA">
##    <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
##    <linescore>
##        <inning away="2" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="4" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="2" home="0"/>
##        <inning away="6" home="1"/>
##        <inning away="0" home="2"/>
##        <inning away="0" home="0"/>
##        <r away="14" home="3" diff="11"/>
##        <h away="17" home="9"/>
##        <e away="1" home="0"/>
##        <hr away="1" home="1"/>
##        <sb away="0" home="0"/>
##        <so away="3" home="6"/>
##    </linescore>
##    <home_runs>
##        <player id="592387" last="Healy" first="Ryon"
```



```

name_display_roster="Healy, R" number="48" hr="1" std_hr="8" inning="8"
runners="1" team_code="oak"/>
##    <player id="572122" last="Seager" first="Kyle"
name_display_roster="Seager, K" number="15" hr="1" std_hr="28"
inning="7" runners="0" team_code="sea"/>
##    </home_runs>
##    <winning_pitcher id="433587" last="Hernandez" first="Felix"
name_display_roster="Hernandez, F" number="34" era="3.58" wins="11"
losses="5"/>
##    <losing_pitcher id="608665" last="Graveman" first="Kendall"
name_display_roster="Graveman" number="49" era="4.13" wins="10"
losses="10"/>
##    <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
##    <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448988-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_seamlb_oakmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448988-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448988-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_seamlb_oakmlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_seamlb_oakmlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_seamlb_oakmlb_1&mode
=preview&c_id=mlb" tv_station="CSCA"/>
##    <broadcast>
##        <home>
##            <tv>CSCA</tv>
##            <radio>95.7 FM The Game, KIQI 1010</radio>
##        </home>
##        <away>
##            <tv>ROOTNW</tv>
##            <radio>710 ESPN</radio>
##        </away>
##    </broadcast>
##    <game_media>
##        <media type="game" calendar_event_id="14-448988-2016-09-10"
start="2016-09-10T16:05:00-0400" title="SEA @ OAK" has_mlbtv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th
_7_preview.jpg"/>
##        <media type="vpp" content_id="1155609883" topic_id=""
headline="Mariners' six-run inning"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/10/images/mlbf_1
155609883_th_43.jpg"/>
##    </game_media>
##

```

```
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/tbamlb-nyamlb-1" venue="Yankee Stadium"
game_pk="448989" time="4:05" time_date="2016/09/10 4:05"
time_date_aw_lg="2016/09/10 4:05" time_date_hm_lg="2016/09/10 4:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="4:05"
away_time_zone="ET" away_ampm="PM" home_time="4:05" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="4:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="4:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="3313" scheduled_innings="9"
description="" away_name_abbrev="TB" home_name_abbrev="NYY"
away_code="tba" away_file_code="tb" away_team_id="139"
away_team_city="Tampa Bay" away_team_name="Rays" away_division="E"
away_league_id="103" away_sport_code="mlb" home_code="nya"
home_file_code="nyy" home_team_id="147" home_team_city="NY Yankees"
home_team_name="Yankees" home_division="E" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="25.0" home_games_back="9.0"
away_games_back_wildcard="21.0" home_games_back_wildcard="5.0"
venue_w_chan_loc="USNY0172" location="Bronx, NY"
gameday="2016_09_10_tbamlb_nyamlb_1" away_win="59" away_loss="82"
home_win="76" home_loss="65"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid_2016_09_10_tbamlb_nyamlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="3"/>
## <inning away="0" home="0"/>
## <inning away="1" home="2"/>
## <inning away="0"/>
## <r away="1" home="5" diff="4"/>
## <h away="6" home="6"/>
## <e away="1" home="0"/>
```

```

##    <hr away="1" home="2"/>
##    <sb away="0" home="0"/>
##    <so away="6" home="11"/>
##    </linescore>
##    <home_runs>
##        <player id="596142" last="Sanchez" first="Gary"
name_display_roster="Sanchez, G" number="24" hr="1" std_hr="13"
inning="6" runners="0" team_code="nya"/>
##        <player id="453056" last="Ellsbury" first="Jacoby"
name_display_roster="Ellsbury" number="22" hr="1" std_hr="8" inning="6"
runners="1" team_code="nya"/>
##        <player id="435064" last="Wilson" first="Bobby"
name_display_roster="Wilson, B" number="21" hr="1" std_hr="6"
inning="8" runners="0" team_code="tba"/>
##    </home_runs>
##    <winning_pitcher id="547888" last="Tanaka" first="Masahiro"
name_display_roster="Tanaka" number="19" era="3.04" wins="13"
losses="4"/>
##    <losing_pitcher id="502042" last="Archer" first="Chris"
name_display_roster="Archer" number="22" era="4.05" wins="8"
losses="18"/>
##    <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
##    <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448989-2016-09-10';media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_tbamlb_nyamlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448989-
2016-09-10';media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448989-
2016-09-10';media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_tbamlb_nyamlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_tbamlb_nyamlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_tbamlb_nyamlb_1&mode=
preview&c_id=mlb" tv_station="YES, MLBN (out-of-market only)"/>
##    <broadcast>
##        <home>
##            <tv>YES, MLBN (out-of-market only)</tv>
##            <radio>WFAN 660/101.9 FM, WADO 1280</radio>
##        </home>
##        <away>
##            <tv>Sun Sports (Alt.), MLBN (out-of-market only)</tv>
##            <radio>WDAE 620 AM /95.3 FM, WGES 680</radio>
##        </away>
##    </broadcast>
##    <game_media>
##        <media type="game" calendar_event_id="14-448989-2016-09-10"
start="2016-09-10T16:05:00-0400" title="TB @ NYY" has_mlb_tv="true"

```

```
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_th
_7_preview.jpg"/>
##    <media type="vpp" content_id="1155506883" topic_id=""
headline="Yankees go back-to-back"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
155506883_th_43.jpg"/>
##    </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/tbanya_448
989_th_7_preview.jpg</video_thumbnail>
##    <video_thumbnails>
##        <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_t
h_7_preview.jpg</thumbnail>
##        <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_t
h_37_preview.jpg</thumbnail>
##    </video_thumbnails>
##    </game>
##    <game id="2016/09/10/cinmlb-pitmlb-1" venue="PNC Park"
game_pk="448979" time="7:05" time_date="2016/09/10 7:05"
time_date_aw_lg="2016/09/10 7:05" time_date_hm_lg="2016/09/10 7:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="7:05"
away_time_zone="ET" away_ampm="PM" home_time="7:05" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="31" scheduled_innings="9"
description="" away_name_abbrev="CIN" home_name_abbrev="PIT"
away_code="cin" away_file_code="cin" away_team_id="113"
away_team_city="Cincinnati" away_team_name="Reds" away_division="C"
away_league_id="104" away_sport_code="mlb" home_code="pit"
home_file_code="pit" home_team_id="134" home_team_city="Pittsburgh"
home_team_name="Pirates" home_division="C" home_league_id="104"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="35.5" home_games_back="25.0"
away_games_back_wildcard="19.0" home_games_back_wildcard="8.5"
venue_w_chan_loc="USPA1290" location="Pittsburgh, PA"
gameday="2016_09_10_cinmlb_pitmlb_1" away_win="59" away_loss="82"
home_win="69" home_loss="71"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_cinmlb_pitmlb_1" league="NN">
##    <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
##    <linescore>
##        <inning away="0" home="2"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="2"/>
```

```

##    <inning away="4" home="0"/>
##    <inning away="3" home="0"/>
##    <inning away="0" home="2"/>
##    <inning away="0" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="1" home="1"/>
##    <r away="8" home="7" diff="1"/>
##    <h away="15" home="10"/>
##    <e away="1" home="0"/>
##    <hr away="1" home="1"/>
##    <sb away="0" home="0"/>
##    <so away="6" home="9"/>
##    </linescore>
##    <home_runs>
##    <player id="458015" last="Votto" first="Joey"
name_display_roster="Votto" number="19" hr="1" std_hr="23" inning="9"
runners="0" team_code="cin"/>
##    <player id="628356" last="Kang" first="Jung Ho"
name_display_roster="Kang" number="27" hr="1" std_hr="18" inning="3"
runners="1" team_code="pit"/>
##    </home_runs>
##    <winning_pitcher id="595001" last="Smith" first="Josh"
name_display_roster="Smith, J" number="73" era="5.21" wins="3"
losses="1"/>
##    <losing_pitcher id="592866" last="Williams" first="Trevor"
name_display_roster="Williams, T" number="57" era="6.75" wins="1"
losses="1"/>
##    <save_pitcher id="571561" last="Cingrani" first="Tony" number="52"
name_display_roster="Cingrani" era="3.61" wins="2" losses="4"
saves="17" svo="22"/>
##    <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448979-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_cinmlb_pitmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448979-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448979-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_cinmlb_pitmlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_cinmlb_pitmlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_cinmlb_pitmlb_1&mode
=preview&c_id=mlb" tv_station="ROOTPIT"/>
##    <broadcast>
##    <home>
##    <tv>ROOTPIT</tv>
##    <radio>KDKA-FM 93.7</radio>
##    </home>
##    <away>

```

```
##      <tv>FS-0</tv>
##      <radio>WLW 700</radio>
##      </away>
##      </broadcast>
##      <game_media>
##      <media type="game" calendar_event_id="14-448979-2016-09-10"
start="2016-09-10T19:05:00-0400" title="CIN @ PIT" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_th
_7_preview.jpg"/>
##      <media type="vpp" content_id="1156584183" topic_id=""
headline="Votto's solo homer"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156584183_th_43.jpg"/>
##      </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/cinpit_448
979_th_7_preview.jpg</video_thumbnail>
##      <video_thumbnails>
##      <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_t
h_7_preview.jpg</thumbnail>
##      <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_t
h_37_preview.jpg</thumbnail>
##      </video_thumbnails>
##      </game>
##      <game id="2016/09/10/phimlb-wasmlb-1" venue="Nationals Park"
game_pk="448986" time="7:05" time_date="2016/09/10 7:05"
time_date_aw_lg="2016/09/10 7:05" time_date_hm_lg="2016/09/10 7:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="7:05"
away_time_zone="ET" away_ampm="PM" home_time="7:05" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="3309" scheduled_innings="9"
description="" away_name_abbrev="PHI" home_name_abbrev="WSH"
away_code="phi" away_file_code="phi" away_team_id="143"
away_team_city="Philadelphia" away_team_name="Phillies"
away_division="E" away_league_id="104" away_sport_code="mlb"
home_code="was" home_file_code="was" home_team_id="120"
home_team_city="Washington" home_team_name="Nationals"
home_division="E" home_league_id="104" home_sport_code="mlb" day="SAT"
gameday_sw="P" double_header_sw="N" game_nbr="1" tbd_flag="N"
away_games_back="24.0" home_games_back="-"
away_games_back_wildcard="16.0" home_games_back_wildcard=""
venue_w_chan_loc="USDC0001" location="Washington, DC"
gameday="2016_09_10_phimlb_wasmlb_1" away_win="63" away_loss="79"
home_win="84" home_loss="58"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
```

```

_2016_09_10_phimlb_wasmlb_1" league="NN">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="3"/>
## <inning away="0"/>
## <r away="0" home="3" diff="3"/>
## <h away="5" home="7"/>
## <e away="0" home="0"/>
## <hr away="0" home="1"/>
## <sb away="2" home="0"/>
## <so away="8" home="10"/>
## </linescore>
## <home_runs>
## <player id="547180" last="Harper" first="Bryce"
name_display_roster="Harper" number="34" hr="1" std_hr="24" inning="8"
runners="2" team_code="was"/>
## </home_runs>
## <winning_pitcher id="518875" last="Kelley" first="Shawn"
name_display_roster="Kelley" number="27" era="3.04" wins="2"
losses="2"/>
## <losing_pitcher id="472610" last="Garcia" first="Luis"
name_display_roster="Garcia, Lu" number="57" era="7.20" wins="1"
losses="1"/>
## <save_pitcher id="453343" last="Melancon" first="Mark" number="43"
name_display_roster="Melancon" era="1.64" wins="2" losses="1"
saves="40" svo="43"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:&apos;14-
448986-2016-09-10&apos;;media_type:&apos;video&apos;})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_phimlb_wasmlb_1&amp;mode=
wrap&amp;c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448986-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
away_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448986-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_phimlb_wasmlb_1&amp
;mode=preview&amp;c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_phimlb_wasmlb_1&amp
;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_phimlb_wasmlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="MASN"/>
## <broadcast>

```

```

##    <home>
##    <tv>MASN</tv>
##    <radio>106.7 The Fan</radio>
##    </home>
##    <away>
##    <tv>CSN-P</tv>
##    <radio>94 WIP</radio>
##    </away>
##    </broadcast>
##    <game_media>
##    <media type="game" calendar_event_id="14-448986-2016-09-10"
start="2016-09-10T19:05:00-0400" title="PHI @ WSH" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_th
_7_preview.jpg"/>
##    <media type="vpp" content_id="1156467183" topic_id=""
headline="Harper's three-run home run"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156467183_th_43.jpg"/>
##    </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/phiwas_448
986_th_7_preview.jpg</video_thumbnail>
##    <video_thumbnails>
##    <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_t
h_7_preview.jpg</thumbnail>
##    <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_t
h_37_preview.jpg</thumbnail>
##    </video_thumbnails>
##    </game>
##    <game id="2016/09/10/balmlb-detmlb-1" venue="Comerica Park"
game_pk="448976" time="7:10" time_date="2016/09/10 7:10"
time_date_aw_lg="2016/09/10 7:10" time_date_hm_lg="2016/09/10 7:10"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="7:10"
away_time_zone="ET" away_ampm="PM" home_time="7:10" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:10" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:10"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="2394" scheduled_innings="9"
description="" away_name_abbrev="BAL" home_name_abbrev="DET"
away_code="bal" away_file_code="bal" away_team_id="110"
away_team_city="Baltimore" away_team_name="Orioles" away_division="E"
away_league_id="103" away_sport_code="mlb" home_code="det"
home_file_code="det" home_team_id="116" home_team_city="Detroit"
home_team_name="Tigers" home_division="C" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="4.0" home_games_back="8.0"
away_games_back_wildcard="-" home_games_back_wildcard="2.5"

```



```

venue_w_chan_loc="USMI0229" location="Detroit, MI"
gameday="2016_09_10_balmlb_detmlb_1" away_win="77" away_loss="64"
home_win="76" home_loss="65"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_balmlb_detmlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="3" home="1"/>
## <inning away="3" home="0"/>
## <inning away="1" home="0"/>
## <inning away="1" home="1"/>
## <inning away="0" home="0"/>
## <inning away="3" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="1"/>
## <inning away="0" home="0"/>
## <r away="11" home="3" diff="8"/>
## <h away="12" home="8"/>
## <e away="0" home="0"/>
## <hr away="4" home="0"/>
## <sb away="0" home="1"/>
## <so away="6" home="9"/>
## </linescore>
## <home_runs>
## <player id="448801" last="Davis" first="Chris"
name_display_roster="Davis, C" number="19" hr="1" std_hr="36"
inning="1" runners="1" team_code="bal"/>
## <player id="446308" last="Wieters" first="Matt"
name_display_roster="Wieters" number="32" hr="2" std_hr="14" inning="6"
runners="2" team_code="bal"/>
## <player id="430945" last="Jones" first="Adam"
name_display_roster="Jones, A" number="10" hr="1" std_hr="27"
inning="1" runners="0" team_code="bal"/>
## </home_runs>
## <winning_pitcher id="434622" last="Jimenez" first="Ubaldo"
name_display_roster="Jimenez" number="31" era="5.98" wins="7"
losses="11"/>
## <losing_pitcher id="519455" last="Zimmermann" first="Jordan"
name_display_roster="Zimmermann" number="27" era="4.94" wins="9"
losses="6"/>
## <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448976-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_balmlb_detmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448976-
2016-09-10',media_type:'audio'})"

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```
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448976-2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_balmlb_detmlb_1&mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_balmlb_detmlb_1&mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_balmlb_detmlb_1&mode=preview&c_id=mlb" tv_station="FS-D, MLBN (out-of-market only)"/>
## <broadcast>
## <home>
## <tv>FS-D, MLBN (out-of-market only)</tv>
## <radio>97.1 The Ticket</radio>
## </home>
## <away>
## <tv>MASN 2, MLBN (out-of-market only)</tv>
## <radio>105.7 The Fan, Orioles Radio Network</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448976-2016-09-10"
start="2016-09-10T19:10:00-0400" title="BAL @ DET" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_7_preview.jpg"/>
## <media type="vpp" content_id="1156702483" topic_id=""
headline="Wieters's two-homer game"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1156702483_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/clemlb-minmlb-1" venue="Target Field"
game_pk="448980" time="7:10" time_date="2016/09/10 7:10"
time_date_aw_lg="2016/09/10 7:10" time_date_hm_lg="2016/09/10 7:10"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="7:10"
away_time_zone="ET" away_ampm="PM" home_time="6:10" home_time_zone="CT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:10" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:10"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="3312" scheduled_innings="9"
```

```

description="" away_name_abbrev="CLE" home_name_abbrev="MIN"
away_code="cle" away_file_code="cle" away_team_id="114"
away_team_city="Cleveland" away_team_name="Indians" away_division="C"
away_league_id="103" away_sport_code="mlb" home_code="min"
home_file_code="min" home_team_id="142" home_team_city="Minnesota"
home_team_name="Twins" home_division="C" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="35.5"
away_games_back_wildcard="" home_games_back_wildcard="30.0"
venue_w_chan_loc="USMN0503" location="Minneapolis, MN"
gameday="2016_09_10_clemlb_minmlb_1" away_win="82" away_loss="59"
home_win="53" home_loss="89"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_clemlb_minmlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="12"
top_inning="N" b="0" s="0" o="2" inning_state="" note="Two out when
winning run scored." is_perfect_game="N" is_no_hitter="N"/>
## <linescore>
## <inning away="1" home="0"/>
## <inning away="0" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="1"/>
## <r away="1" home="2" diff="1"/>
## <h away="7" home="7"/>
## <e away="0" home="0"/>
## <hr away="0" home="1"/>
## <sb away="0" home="0"/>
## <so away="9" home="5"/>
## </linescore>
## <home_runs>
## <player id="593934" last="Sano" first="Miguel"
name_display_roster="Sano" number="22" hr="1" std_hr="23" inning="2"
runners="0" team_code="min"/>
## </home_runs>
## <winning_pitcher id="608638" last="Chargois" first="J.T."
name_display_roster="Chargois" number="60" era="6.60" wins="1"
losses="1"/>
## <losing_pitcher id="571572" last="Colon" first="Joseph"
name_display_roster="Colon, J" number="65" era="3.00" wins="1"
losses="2"/>
## <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>

```

```

## <links mlb_tv="bam.media.launchPlayer({calendar_event_id:'14-448980-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_clemlb_minmlb_1&mode=wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448980-2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448980-2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_clemlb_minmlb_1&mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_clemlb_minmlb_1&mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_clemlb_minmlb_1&mode=preview&c_id=mlb" tv_station="FSNO"/>
## <broadcast>
## <home>
## <tv>FSNO</tv>
## <radio>Go 96.3, TIBN</radio>
## </home>
## <away>
## <tv>SportsTime Ohio</tv>
## <radio>WTAM 1100, WMMS 100.7, Indians Radio Network</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448980-2016-09-10"
start="2016-09-10T19:10:00-0400" title="CLE @ MIN" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_7_preview.jpg"/>
## <media type="vpp" content_id="1156703583" topic_id=""
headline="Mauer's walk-off single"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1156703583_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/kcamlb-chamlb-1" venue="U.S. Cellular Field"
game_pk="448982" time="7:10" time_date="2016/09/10 7:10"
time_date_aw_lg="2016/09/10 7:10" time_date_hm_lg="2016/09/10 7:10"

```

```
time_zone="ET" ampm="PM" first_pitch_et="" away_time="6:10"
away_time_zone="CT" away_ampm="PM" home_time="6:10" home_time_zone="CT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:10" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:10"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="4" scheduled_innings="9"
description="" away_name_abbrev="KC" home_name_abbrev="CWS"
away_code="kca" away_file_code="kc" away_team_id="118"
away_team_city="Kansas City" away_team_name="Royals" away_division="C"
away_league_id="103" away_sport_code="mlb" home_code="cha"
home_file_code="cws" home_team_id="145" home_team_city="Chi White Sox"
home_team_name="White Sox" home_division="C" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="13.5" home_games_back="16.5"
away_games_back_wildcard="8.0" home_games_back_wildcard="11.0"
venue_w_chan_loc="USIL0225" location="Chicago, IL"
gameday="2016_09_10_kcamlb_chamlb_1" away_win="73" away_loss="68"
home_win="68" home_loss="73"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_kcamlb_chamlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="2" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="1"/>
## <inning away="1" home="1"/>
## <inning away="0" home="2"/>
## <inning away="0" home="0"/>
## <inning away="3" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="1"/>
## <r away="6" home="5" diff="1"/>
## <h away="7" home="13"/>
## <e away="0" home="1"/>
## <hr away="2" home="0"/>
## <sb away="1" home="1"/>
## <so away="9" home="7"/>
## </linescore>
## <home_runs>
## <player id="543333" last="Hosmer" first="Eric"
name_display_roster="Hosmer" number="35" hr="1" std_hr="22" inning="1"
runners="1" team_code="kca"/>
## <player id="460086" last="Gordon" first="Alex"
name_display_roster="Gordon" number="4" hr="1" std_hr="15" inning="4"
runners="0" team_code="kca"/>
## </home_runs>
## <winning_pitcher id="641838" last="McCarthy" first="Kevin"
name_display_roster="McCarthy, K" number="61" era="0.00" wins="1"
```

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losses="0"/>
##   <losing_pitcher id="571476" last="Beck" first="Chris"
name_display_roster="Beck, C" number="54" era="7.41" wins="2"
losses="2"/>
##   <save_pitcher id="451584" last="Davis" first="Wade" number="17"
name_display_roster="Davis, W" era="2.23" wins="1" losses="1"
saves="23" svo="26"/>
##   <links mlbtv="bam.media.launchPlayer({calendar_event_id:&apos;14-
448982-2016-09-10&apos;;media_type:&apos;video&apos;})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_kcamlb_chamlb_1&amp;mode=
wrap&amp;c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448982-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
away_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448982-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_kcamlb_chamlb_1&amp
;mode=preview&amp;c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_kcamlb_chamlb_1&amp
;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_kcamlb_chamlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="CSN-C"/>
##   <broadcast>
##     <home>
##       <tv>CSN-C</tv>
##       <radio>WLS 890, WRT0 1200</radio>
##     </home>
##     <away>
##       <tv>FSKC</tv>
##       <radio>KCSP 610, RRN</radio>
##     </away>
##   </broadcast>
##   <game_media>
##     <media type="game" calendar_event_id="14-448982-2016-09-10"
start="2016-09-10T19:10:00-0400" title="KC @ CWS" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_th
_7_preview.jpg"/>
##     <media type="vpp" content_id="1156358883" topic_id=""
headline="Merrifield&apos;s go-ahead double"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156358883_th_43.jpg"/>
##   </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/kcacha_448
982_th_7_preview.jpg</video_thumbnail>
##   <video_thumbnails>
##     <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_t
h_7_preview.jpg</thumbnail>
##     <thumbnail scenario="37" width="160"

```

```
height="90">http://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/lanmlb-miamlb-1" venue="Marlins Park"
game_pk="448983" time="7:10" time_date="2016/09/10 7:10"
time_date_aw_lg="2016/09/10 7:10" time_date_hm_lg="2016/09/10 7:10"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="4:10"
away_time_zone="PT" away_ampm="PM" home_time="7:10" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:10" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:10"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="4169" scheduled_innings="9"
description="" away_name_abbrev="LAD" home_name_abbrev="MIA"
away_code="lan" away_file_code="la" away_team_id="119"
away_team_city="LA Dodgers" away_team_name="Dodgers" away_division="W"
away_league_id="104" away_sport_code="mlb" home_code="mia"
home_file_code="mia" home_team_id="146" home_team_city="Miami"
home_team_name="Marlins" home_division="E" home_league_id="104"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="15.5"
away_games_back_wildcard="" home_games_back_wildcard="7.5"
venue_w_chan_loc="USFL0316" location="Miami, FL"
gameday="2016_09_10_lanmlb_miamlb_1" away_win="80" away_loss="61"
home_win="70" home_loss="72"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_lanmlb_miamlb_1" league="NN">
## <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="1" home="0"/>
## <inning away="3" home="0"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <r away="5" home="0" diff="5"/>
## <h away="8" home="2"/>
## <e away="1" home="0"/>
## <hr away="4" home="0"/>
## <sb away="0" home="0"/>
## <so away="12" home="8"/>
## </linescore>
## <home_runs>
## <player id="457759" last="Turner" first="Justin"
name_display_roster="Turner" number="10" hr="1" std_hr="26" inning="6"
```

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runners="0" team_code="lan"/>
## <player id="592626" last="Pederson" first="Joc"
name_display_roster="Pederson" number="31" hr="2" std_hr="22"
inning="7" runners="0" team_code="lan"/>
## <player id="608369" last="Seager" first="Corey"
name_display_roster="Seager, C" number="5" hr="1" std_hr="25"
inning="6" runners="1" team_code="lan"/>
## </home_runs>
## <winning_pitcher id="448179" last="Hill" first="Rich"
name_display_roster="Hill, R" number="44" era="1.80" wins="12"
losses="3"/>
## <losing_pitcher id="543408" last="Koehler" first="Tom"
name_display_roster="Koehler" number="34" era="3.97" wins="9"
losses="11"/>
## <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448983-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_lanmlb_miamlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448983-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448983-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_lanmlb_miamlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_lanmlb_miamlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_lanmlb_miamlb_1&mode
=preview&c_id=mlb" tv_station="FS-F"/>
## <broadcast>
## <home>
## <tv>FS-F</tv>
## <radio>610 AM WIOD, WAQI 710</radio>
## </home>
## <away>
## <tv>SportsNet LA, SNLA Spanish</tv>
## <radio>570 LA Sports, KTNQ 1020, KMPC 1540</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448983-2016-09-10"
start="2016-09-10T19:10:00-0400" title="LAD @ MIA" has_mlbtv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_th
_7_preview.jpg"/>
## <media type="vpp" content_id="1157184283" topic_id=""
headline="Hill perfect through seven"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
157184283_th_43.jpg"/>

```



```
##    </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/lanmia_448
983_th_7_preview.jpg</video_thumbnail>
##    <video_thumbnails>
##        <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_t
h_7_preview.jpg</thumbnail>
##        <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_t
h_37_preview.jpg</thumbnail>
##    </video_thumbnails>
##    </game>
##    <game id="2016/09/10/nynmlb-atlmlb-1" venue="Turner Field"
game_pk="448985" time="7:10" time_date="2016/09/10 7:10"
time_date_aw_lg="2016/09/10 7:10" time_date_hm_lg="2016/09/10 7:10"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="7:10"
away_time_zone="ET" away_ampm="PM" home_time="7:10" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:10" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:10"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="16" scheduled_innings="9"
description="" away_name_abbrev="NYM" home_name_abbrev="ATL"
away_code="nyn" away_file_code="nym" away_team_id="121"
away_team_city="NY Mets" away_team_name="Mets" away_division="E"
away_league_id="104" away_sport_code="mlb" home_code="atl"
home_file_code="atl" home_team_id="144" home_team_city="Atlanta"
home_team_name="Braves" home_division="E" home_league_id="104"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="8.0" home_games_back="26.5"
away_games_back_wildcard="-" home_games_back_wildcard="18.5"
venue_w_chan_loc="USGA0028" location="Atlanta, GA"
gameday="2016_09_10_nynmlb_atlmlb_1" away_win="75" away_loss="67"
home_win="55" home_loss="87"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_nynmlb_atlmlb_1" league="NN">
##    <status status="Final" ind="F" reason="" inning="10"
top_inning="N" b="0" s="0" o="2" inning_state="" note="Two out when
winning run scored." is_perfect_game="N" is_no_hitter="N"/>
##    <linescore>
##        <inning away="2" home="1"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="1"/>
##        <inning away="1" home="0"/>
##        <inning away="0" home="1"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="0"/>
##        <inning away="0" home="1"/>
```

```

##    <r away="3" home="4" diff="1"/>
##    <h away="7" home="8"/>
##    <e away="0" home="2"/>
##    <hr away="1" home="2"/>
##    <sb away="1" home="0"/>
##    <so away="4" home="7"/>
##    </linescore>
##    <home_runs>
##        <player id="493316" last="Cespedes" first="Yoenis"
name_display_roster="Cespedes" number="52" hr="1" std_hr="29"
inning="5" runners="0" team_code="nyn"/>
##        <player id="455976" last="Markakis" first="Nick"
name_display_roster="Markakis" number="22" hr="1" std_hr="10"
inning="4" runners="0" team_code="atl"/>
##        <player id="461314" last="Kemp" first="Matt"
name_display_roster="Kemp, M" number="27" hr="1" std_hr="30" inning="6"
runners="0" team_code="atl"/>
##    </home_runs>
##    <winning_pitcher id="519437" last="Withrow" first="Chris"
name_display_roster="Withrow" number="51" era="3.53" wins="3"
losses="0"/>
##    <losing_pitcher id="592340" last="Goeddel" first="Erik"
name_display_roster="Goeddel" number="62" era="4.80" wins="1"
losses="1"/>
##    <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
##    <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448985-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_nynmlb_atlmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448985-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448985-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_nynmlb_atlmlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_nynmlb_atlmlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_nynmlb_atlmlb_1&mode
=preview&c_id=mlb" tv_station="FSS0"/>
##    <broadcast>
##        <home>
##            <tv>FSS0</tv>
##            <radio>680 AM/93.7 FM, WYAY 106.7, Braves Radio Network</radio>
##        </home>
##        <away>
##            <tv>WPIX</tv>
##            <radio>710 WOR, ESPN Deportes 1050</radio>
##        </away>
##    </broadcast>

```

```

## <game_media>
## <media type="game" calendar_event_id="14-448985-2016-09-10"
start="2016-09-10T19:10:00-0400" title="NYM @ ATL" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_th
_7_preview.jpg"/>
## <media type="vpp" content_id="1156665683" topic_id=""
headline="Garcia's game-winning RBI single"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156665683_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/nynatl_448
985_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_t
h_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/milmlb-slnmlb-1" venue="Busch Stadium"
game_pk="448984" time="7:15" time_date="2016/09/10 7:15"
time_date_aw_lg="2016/09/10 7:15" time_date_hm_lg="2016/09/10 7:15"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="6:15"
away_time_zone="CT" away_ampm="PM" home_time="6:15" home_time_zone="CT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="7:15" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="7:15"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="2889" scheduled_innings="9"
description="" away_name_abbrev="MIL" home_name_abbrev="STL"
away_code="mil" away_file_code="mil" away_team_id="158"
away_team_city="Milwaukee" away_team_name="Brewers" away_division="C"
away_league_id="104" away_sport_code="mlb" home_code="sln"
home_file_code="stl" home_team_id="138" home_team_city="St. Louis"
home_team_name="Cardinals" home_division="C" home_league_id="104"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="30.5" home_games_back="17.5"
away_games_back_wildcard="14.0" home_games_back_wildcard="1.0"
venue_w_chan_loc="USM00787" location="St. Louis, MO"
gameday="2016_09_10_milmlb_slnmlb_1" away_win="63" away_loss="79"
home_win="75" home_loss="66"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_milmlb_slnmlb_1" league="NN">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>

```

```

##    <inning away="0" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="1" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="0" home="0"/>
##    <inning away="0" home="5"/>
##    <inning away="0"/>
##    <r away="1" home="5" diff="4"/>
##    <h away="6" home="8"/>
##    <e away="1" home="0"/>
##    <hr away="1" home="0"/>
##    <sb away="0" home="0"/>
##    <so away="7" home="8"/>
##    </linescore>
##    <home_runs>
##    <player id="542979" last="Broxton" first="Keon"
name_display_roster="Broxton, K" number="23" hr="1" std_hr="7"
inning="5" runners="0" team_code="mil"/>
##    </home_runs>
##    <winning_pitcher id="425794" last="Wainwright" first="Adam"
name_display_roster="Wainwright" number="50" era="4.45" wins="11"
losses="8"/>
##    <losing_pitcher id="608349" last="Knebel" first="Corey"
name_display_roster="Knebel" number="46" era="6.00" wins="1"
losses="3"/>
##    <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
##    <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448984-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_milmlb_slnmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448984-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448984-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_milmlb_slnmlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_milmlb_slnmlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_milmlb_slnmlb_1&mode
=preview&c_id=mlb" tv_station="FS-M"/>
##    <broadcast>
##    <home>
##    <tv>FS-M</tv>
##    <radio>KMOX 1120, CRN</radio>
##    </home>
##    <away>
##    <tv>FSWI</tv>

```

```
##      <radio>WTMJ 620, Brewers Radio Network</radio>
##      </away>
##      </broadcast>
##      <game_media>
##      <media type="game" calendar_event_id="14-448984-2016-09-10"
start="2016-09-10T19:15:00-0400" title="MIL @ STL" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/milsl_n_448984_th
_7_preview.jpg"/>
##      <media type="vpp" content_id="1157046083" topic_id=""
headline="Wainwright earns win No. 11"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlb_f_1
157046083_th_43.jpg"/>
##      </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/milsl_n_448
984_th_7_preview.jpg</video_thumbnail>
##      <video_thumbnails>
##      <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/milsl_n_448984_t
h_7_preview.jpg</thumbnail>
##      <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/milsl_n_448984_t
h_37_preview.jpg</thumbnail>
##      </video_thumbnails>
##      </game>
##      <game id="2016/09/10/sfnmlb-arimlb-1" venue="Chase Field"
game_pk="448987" time="8:10" time_date="2016/09/10 8:10"
time_date_aw_lg="2016/09/10 8:10" time_date_hm_lg="2016/09/10 8:10"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="5:10"
away_time_zone="PT" away_ampm="PM" home_time="5:10"
home_time_zone="MST" home_ampm="PM" game_type="R" tiebreaker_sw="N"
resume_date="" original_date="2016/09/10" time_zone_aw_lg="-4"
time_zone_hm_lg="-4" time_aw_lg="8:10" aw_lg_ampm="PM"
tz_aw_lg_gen="ET" time_hm_lg="8:10" hm_lg_ampm="PM" tz_hm_lg_gen="ET"
venue_id="15" scheduled_innings="9" description=""
away_name_abbrev="SF" home_name_abbrev="ARI" away_code="sfn"
away_file_code="sf" away_team_id="137" away_team_city="San Francisco"
away_team_name="Giants" away_division="W" away_league_id="104"
away_sport_code="mlb" home_code="ari" home_file_code="ari"
home_team_id="109" home_team_city="Arizona" home_team_name="D-backs"
home_division="W" home_league_id="104" home_sport_code="mlb" day="SAT"
gameday_sw="P" double_header_sw="N" game_nbr="1" tbd_flag="N"
away_games_back="4.0" home_games_back="22.0"
away_games_back_wildcard="-" home_games_back_wildcard="18.0"
venue_w_chan_loc="USAZ0166" location="Phoenix, AZ"
gameday="2016_09_10_sfnmlb_arimlb_1" away_win="76" away_loss="65"
home_win="58" home_loss="83"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_sfnmlb_arimlb_1" league="NN">
```

```

## <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="1" home="0"/>
## <inning away="4" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="2" home="1"/>
## <inning away="4" home="0"/>
## <inning away="0" home="1"/>
## <r away="11" home="3" diff="8"/>
## <h away="19" home="5"/>
## <e away="0" home="0"/>
## <hr away="1" home="2"/>
## <sb away="1" home="0"/>
## <so away="8" home="8"/>
## </linescore>
## <home_runs>
## <player id="598284" last="O'Brien" first="Peter"
name_display_roster="O'Brien" number="14" hr="1" std_hr="5"
inning="3" runners="0" team_code="ari"/>
## <player id="452254" last="Pence" first="Hunter"
name_display_roster="Pence" number="8" hr="1" std_hr="11" inning="7"
runners="0" team_code="sfn"/>
## <player id="630111" last="Tomas" first="Yasmany"
name_display_roster="Tomas" number="24" hr="1" std_hr="28" inning="9"
runners="0" team_code="ari"/>
## </home_runs>
## <winning_pitcher id="456501" last="Cueto" first="Johnny"
name_display_roster="Cueto" number="47" era="2.90" wins="15"
losses="5"/>
## <losing_pitcher id="605151" last="Bradley" first="Archie"
name_display_roster="Bradley, A" number="25" era="5.10" wins="6"
losses="9"/>
## <save_pitcher id="" last="" first="" number=""
name_display_roster="" era="0" wins="0" losses="0" saves="0" svo="0"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448987-2016-09-10';media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_sfnmlb_arimlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448987-
2016-09-10';media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448987-
2016-09-10';media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_sfnmlb_arimlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_sfnmlb_arimlb_1&

```

```
;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_sfnmlb_arimlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="FS-A"/>
## <broadcast>
## <home>
## <tv>FS-A</tv>
## <radio>Arizona Sports 98.7 FM, KSUN La Mejor 1400</radio>
## </home>
## <away>
## <tv>CSBA</tv>
## <radio>KNBR 680</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448987-2016-09-10"
start="2016-09-10T20:10:00-0400" title="SF @ ARI" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_th
_7_preview.jpg"/>
## <media type="vpp" content_id="1156514683" topic_id=""
headline="Pence's solo homer"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156514683_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/sfnari_448
987_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_t
h_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## <game id="2016/09/10/colmlb-sdnmlb-1" venue="Petco Park"
game_pk="448981" time="8:40" time_date="2016/09/10 8:40"
time_date_aw_lg="2016/09/10 8:40" time_date_hm_lg="2016/09/10 8:40"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="6:40"
away_time_zone="MT" away_ampm="PM" home_time="5:40" home_time_zone="PT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="8:40" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="8:40"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="2680" scheduled_innings="9"
description="" away_name_abbrev="COL" home_name_abbrev="SD"
away_code="col" away_file_code="col" away_team_id="115"
away_team_city="Colorado" away_team_name="Rockies" away_division="W"
away_league_id="104" away_sport_code="mlb" home_code="sdn"
home_file_code="sd" home_team_id="135" home_team_city="San Diego"
```

```
home_team_name="Padres" home_division="W" home_league_id="104"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="16.0" home_games_back="23.0"
away_games_back_wildcard="12.0" home_games_back_wildcard="19.0"
venue_w_chan_loc="USCA0982" location="San Diego, CA"
gameday="2016_09_10_colmlb_sdnmlb_1" away_win="68" away_loss="74"
home_win="59" home_loss="83"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_colmlb_sdnmlb_1" league="NN">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="1"/>
## <inning away="0" home="5"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="3" home="0"/>
## <inning away="0"/>
## <r away="3" home="6" diff="3"/>
## <h away="4" home="8"/>
## <e away="1" home="1"/>
## <hr away="0" home="0"/>
## <sb away="0" home="0"/>
## <so away="5" home="11"/>
## </linescore>
## <winning_pitcher id="543184" last="Friedrich" first="Christian"
name_display_roster="Friedrich" number="53" era="4.67" wins="5"
losses="10"/>
## <losing_pitcher id="592351" last="Gray" first="Jon"
name_display_roster="Gray, J" number="55" era="4.69" wins="9"
losses="8"/>
## <save_pitcher id="543506" last="Maurer" first="Brandon"
number="37" name_display_roster="Maurer" era="4.65" wins="0" losses="4"
saves="9" svo="14"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:&apos;14-
448981-2016-09-10&apos;;media_type:&apos;video&apos;})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_colmlb_sdnmlb_1&amp;mode=
wrap&amp;c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448981-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
away_audio="bam.media.launchPlayer({calendar_event_id:&apos;14-448981-
2016-09-10&apos;;media_type:&apos;audio&apos;})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_colmlb_sdnmlb_1&amp
;mode=preview&amp;c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_colmlb_sdnmlb_1&amp
;mode=preview&amp;c_id=mlb"
```



```
preview="/mlb/gameday/index.jsp?gid=2016_09_10_colmlb_sdnmlb_1&mode
=preview&c_id=mlb" tv_station="FSSD, FOX Deportes San Diego"/>
##   <broadcast>
##   <home>
##   <tv>FSSD, FOX Deportes San Diego</tv>
##   <radio>XPRS 1090, XEMO 860</radio>
##   </home>
##   <away>
##   <tv>ROOTRM</tv>
##   <radio>KOA 850 AM</radio>
##   </away>
##   </broadcast>
##   <game_media>
##   <media type="game" calendar_event_id="14-448981-2016-09-10"
start="2016-09-10T20:40:00-0400" title="COL @ SD" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_th
_7_preview.jpg"/>
##   <media type="vpp" content_id="1156618783" topic_id=""
headline="Friedrich's 10th strikeout"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
156618783_th_43.jpg"/>
##   </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/colsdn_448
981_th_7_preview.jpg</video_thumbnail>
##   <video_thumbnails>
##   <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_t
h_7_preview.jpg</thumbnail>
##   <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_t
h_37_preview.jpg</thumbnail>
##   </video_thumbnails>
##   </game>
##   <game id="2016/09/10/texmlb-anamlb-1" venue="Angel Stadium of
Anaheim" game_pk="448990" time="9:05" time_date="2016/09/10 9:05"
time_date_aw_lg="2016/09/10 9:05" time_date_hm_lg="2016/09/10 9:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="8:05"
away_time_zone="CT" away_ampm="PM" home_time="6:05" home_time_zone="PT"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="9:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="9:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="1" scheduled_innings="9"
description="" away_name_abbrev="TEX" home_name_abbrev="LAA"
away_code="tex" away_file_code="tex" away_team_id="140"
away_team_city="Texas" away_team_name="Rangers" away_division="W"
away_league_id="103" away_sport_code="mlb" home_code="ana"
home_file_code="ana" home_team_id="108" home_team_city="LA Angels"
home_team_name="Angels" home_division="W" home_league_id="103"
```

```

home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="21.0"
away_games_back_wildcard="" home_games_back_wildcard="15.0"
venue_w_chan_loc="USCA0027" location="Anaheim, CA"
gameday="2016_09_10_texmlb_anamlb_1" away_win="85" away_loss="58"
home_win="62" home_loss="79"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_texmlb_anamlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="N"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="2" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="1"/>
## <inning away="2" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="3"/>
## <inning away="3" home="0"/>
## <inning away="1" home="0"/>
## <r away="8" home="5" diff="3"/>
## <h away="12" home="9"/>
## <e away="1" home="0"/>
## <hr away="3" home="1"/>
## <sb away="0" home="3"/>
## <so away="8" home="8"/>
## </linescore>
## <home_runs>
## <player id="594777" last="Calhoun" first="Kole"
name_display_roster="Calhoun" number="56" hr="1" std_hr="17" inning="7"
runners="1" team_code="ana"/>
## <player id="518960" last="Lucroy" first="Jonathan"
name_display_roster="Lucroy" number="25" hr="1" std_hr="23" inning="8"
runners="1" team_code="tex"/>
## <player id="460576" last="Gomez" first="Carlos"
name_display_roster="Gomez" number="14" hr="2" std_hr="9" inning="4"
runners="1" team_code="tex"/>
## </home_runs>
## <winning_pitcher id="489294" last="Scheppers" first="Tanner"
name_display_roster="Scheppers" number="52" era="0.00" wins="1"
losses="0"/>
## <losing_pitcher id="572308" last="Valdez" first="Jose"
name_display_roster="Valdez, Jo" number="32" era="3.45" wins="1"
losses="2"/>
## <save_pitcher id="473879" last="Dyson" first="Sam" number="47"
name_display_roster="Dyson, S" era="2.56" wins="1" losses="2"
saves="34" svo="38"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448990-2016-09-10';media_type:'video'})">

```

```

wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_texmlb_anamlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448990-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448990-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_texmlb_anamlb_1&
;mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_texmlb_anamlb_1&
;mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_texmlb_anamlb_1&mode
=preview&c_id=mlb" tv_station="FS-W"/>
## <broadcast>
## <home>
## <tv>FS-W</tv>
## <radio>KLAA 830, KWKW 1330</radio>
## </home>
## <away>
## <tv>FSSW</tv>
## <radio>105.3 The Fan, 1540am ESPN Deportes</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448990-2016-09-10"
start="2016-09-10T21:05:00-0400" title="TEX @ LAA" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/texana_448990_th
_7_preview.jpg"/>
## <media type="vpp" content_id="1157047783" topic_id=""
headline="Lucroy's go-ahead two-run homer"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
157047783_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/texana_448
990_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/texana_448990_t
h_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/texana_448990_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>
## </games>

## NULL

```

`xmlName(xmltop)` *#give name of node*

```

## [1] "games"

xmlSize(xmltop) #how many children in node

## [1] 15

xmlName(xmltop[[1]]) #name of root's children

## [1] "game"

print(xmltop[[1]])

## <game id="2016/09/10/bosmlb-tormlb-1" venue="Rogers Centre"
game_pk="448977" time="1:05" time_date="2016/09/10 1:05"
time_date_aw_lg="2016/09/10 1:05" time_date_hm_lg="2016/09/10 1:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="1:05"
away_time_zone="ET" away_ampm="PM" home_time="1:05" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="1:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="1:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="14" scheduled_innings="9"
description="" away_name_abbrev="BOS" home_name_abbrev="TOR"
away_code="bos" away_file_code="bos" away_team_id="111"
away_team_city="Boston" away_team_name="Red Sox" away_division="E"
away_league_id="103" away_sport_code="mlb" home_code="tor"
home_file_code="tor" home_team_id="141" home_team_city="Toronto"
home_team_name="Blue Jays" home_division="E" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="4.0"
away_games_back_wildcard="" home_games_back_wildcard="-"
venue_w_chan_loc="CAXX0504" location="Toronto, Canada"
gameday="2016_09_10_bosmlb_tormlb_1" away_win="79" away_loss="62"
home_win="78" home_loss="63"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_bosmlb_tormlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="2"/>
## <inning away="0" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="1" home="0"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0"/>
## <r away="2" home="3" diff="1"/>
## <h away="4" home="6"/>
## <e away="1" home="1"/>

```

```

## <hr away="1" home="1"/>
## <sb away="1" home="1"/>
## <so away="8" home="8"/>
## </linescore>
## <home_runs>
## <player id="425834" last="Upton" first="Melvin"
name_display_roster="Upton Jr." number="7" hr="1" std_hr="20"
inning="2" runners="1" team_code="tor"/>
## <player id="456030" last="Pedroia" first="Dustin"
name_display_roster="Pedroia" number="15" hr="1" std_hr="13" inning="6"
runners="0" team_code="bos"/>
## </home_runs>
## <winning_pitcher id="457918" last="Happ" first="J.A."
name_display_roster="Happ" number="33" era="3.33" wins="18"
losses="4"/>
## <losing_pitcher id="593958" last="Rodriguez" first="Eduardo"
name_display_roster="Rodriguez, E" number="52" era="4.70" wins="2"
losses="7"/>
## <save_pitcher id="532077" last="Osuna" first="Roberto" number="54"
name_display_roster="Osuna" era="2.36" wins="2" losses="2" saves="31"
svo="34"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448977-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448977-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448977-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&mode
=preview&c_id=mlb" tv_station="FOX"/>
## <broadcast>
## <home>
## <tv>FOX</tv>
## <radio>SN590</radio>
## </home>
## <away>
## <tv>FOX</tv>
## <radio>WEEI 93.7, WCCM 1110 AM</radio>
## </away>
## </broadcast>
## <game_media>
## <media type="game" calendar_event_id="14-448977-2016-09-10"
start="2016-09-10T13:05:00-0400" title="BOS @ TOR" has_mlbtv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/bostor_448977_th

```

```

_7_preview.jpg"/>
## <media type="vpp" content_id="1154983783" topic_id=""
headline="Upton Jr.&apos;s two-run home run"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/10/images/mlbf_1
154983783_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/bospor_448
977_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
## <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/bospor_448977_t
h_7_preview.jpg</thumbnail>
## <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/bospor_448977_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>

gameNodes <- getNodeSet(xmltop, "//game")
head(gameNodes, 2)

## [[1]]
## <game id="2016/09/10/bosmlb-tormlb-1" venue="Rogers Centre"
game_pk="448977" time="1:05" time_date="2016/09/10 1:05"
time_date_aw_lg="2016/09/10 1:05" time_date_hm_lg="2016/09/10 1:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="1:05"
away_time_zone="ET" away_ampm="PM" home_time="1:05" home_time_zone="ET"
home_ampm="PM" game_type="R" tiebreaker_sw="N" resume_date=""
original_date="2016/09/10" time_zone_aw_lg="-4" time_zone_hm_lg="-4"
time_aw_lg="1:05" aw_lg_ampm="PM" tz_aw_lg_gen="ET" time_hm_lg="1:05"
hm_lg_ampm="PM" tz_hm_lg_gen="ET" venue_id="14" scheduled_innings="9"
description="" away_name_abbrev="BOS" home_name_abbrev="TOR"
away_code="bos" away_file_code="bos" away_team_id="111"
away_team_city="Boston" away_team_name="Red Sox" away_division="E"
away_league_id="103" away_sport_code="mlb" home_code="tor"
home_file_code="tor" home_team_id="141" home_team_city="Toronto"
home_team_name="Blue Jays" home_division="E" home_league_id="103"
home_sport_code="mlb" day="SAT" gameday_sw="P" double_header_sw="N"
game_nbr="1" tbd_flag="N" away_games_back="-" home_games_back="4.0"
away_games_back_wildcard="" home_games_back_wildcard="-"
venue_w_chan_loc="CAXX0504" location="Toronto, Canada"
gameday="2016_09_10_bosmlb_tormlb_1" away_win="79" away_loss="62"
home_win="78" home_loss="63"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_bosmlb_tormlb_1" league="AA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>

```

```

## <inning away="0" home="0"/>
## <inning away="0" home="2"/>
## <inning away="0" home="1"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="1" home="0"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0"/>
## <r away="2" home="3" diff="1"/>
## <h away="4" home="6"/>
## <e away="1" home="1"/>
## <hr away="1" home="1"/>
## <sb away="1" home="1"/>
## <so away="8" home="8"/>
## </linescore>
## <home_runs>
## <player id="425834" last="Upton" first="Melvin"
name_display_roster="Upton Jr." number="7" hr="1" std_hr="20"
inning="2" runners="1" team_code="tor"/>
## <player id="456030" last="Pedroia" first="Dustin"
name_display_roster="Pedroia" number="15" hr="1" std_hr="13" inning="6"
runners="0" team_code="bos"/>
## </home_runs>
## <winning_pitcher id="457918" last="Happ" first="J.A."
name_display_roster="Happ" number="33" era="3.33" wins="18"
losses="4"/>
## <losing_pitcher id="593958" last="Rodriguez" first="Eduardo"
name_display_roster="Rodriguez, E" number="52" era="4.70" wins="2"
losses="7"/>
## <save_pitcher id="532077" last="Osuna" first="Roberto" number="54"
name_display_roster="Osuna" era="2.36" wins="2" losses="2" saves="31"
svo="34"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448977-2016-09-10';media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448977-
2016-09-10';media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448977-
2016-09-10';media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&
mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&
mode=preview&c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_bosmlb_tormlb_1&mode
=preview&c_id=mlb" tv_station="FOX"/>
## <broadcast>
## <home>
## <tv>FOX</tv>

```

```
##    <radio>SN590</radio>
##    </home>
##    <away>
##    <tv>FOX</tv>
##    <radio>WEEI 93.7, WCCM 1110 AM</radio>
##    </away>
##    </broadcast>
##    <game_media>
##    <media type="game" calendar_event_id="14-448977-2016-09-10"
start="2016-09-10T13:05:00-0400" title="BOS @ TOR" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/boston_448977_th
_7_preview.jpg"/>
##    <media type="vpp" content_id="1154983783" topic_id=""
headline="Upton Jr.'s two-run home run"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/10/images/mlbf_1
154983783_th_43.jpg"/>
##    </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/boston_448
977_th_7_preview.jpg</video_thumbnail>
##    <video_thumbnails>
##    <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/boston_448977_t
h_7_preview.jpg</thumbnail>
##    <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/boston_448977_t
h_37_preview.jpg</thumbnail>
##    </video_thumbnails>
##    </game>
##
##    [[2]]
##    <game id="2016/09/10/chnmlb-houmlb-1" venue="Minute Maid Park"
game_pk="448978" time="1:05" time_date="2016/09/10 1:05"
time_date_aw_lg="2016/09/10 1:05" time_date_hm_lg="2016/09/10 1:05"
time_zone="ET" ampm="PM" first_pitch_et="" away_time="12:05"
away_time_zone="CT" away_ampm="PM" home_time="12:05"
home_time_zone="CT" home_ampm="PM" game_type="R" tiebreaker_sw="N"
resume_date="" original_date="2016/09/10" time_zone_aw_lg="-4"
time_zone_hm_lg="-4" time_aw_lg="1:05" aw_lg_ampm="PM"
tz_aw_lg_gen="ET" time_hm_lg="1:05" hm_lg_ampm="PM" tz_hm_lg_gen="ET"
venue_id="2392" scheduled_innings="9" description=""
away_name_abbrev="CHC" home_name_abbrev="HOU" away_code="chn"
away_file_code="chc" away_team_id="112" away_team_city="Chi Cubs"
away_team_name="Cubs" away_division="C" away_league_id="104"
away_sport_code="mlb" home_code="hou" home_file_code="hou"
home_team_id="117" home_team_city="Houston" home_team_name="Astros"
home_division="W" home_league_id="103" home_sport_code="mlb" day="SAT"
gameday_sw="P" double_header_sw="N" game_nbr="1" tbd_flag="N"
away_games_back="-" home_games_back="11.0" away_games_back_wildcard=""
```



```

home_games_back_wildcard="5.0" venue_w_chan_loc="USTX0617"
location="Houston, TX" gameday="2016_09_10_chnmlb_houmlb_1"
away_win="90" away_loss="51" home_win="75" home_loss="67"
game_data_directory="/components/game/mlb/year_2016/month_09/day_10/gid
_2016_09_10_chnmlb_houmlb_1" league="NA">
## <status status="Final" ind="F" reason="" inning="9" top_inning="Y"
b="0" s="0" o="3" inning_state="" note="" is_perfect_game="N"
is_no_hitter="N"/>
## <linescore>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="2"/>
## <inning away="1" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0" home="0"/>
## <inning away="0"/>
## <r away="1" home="2" diff="1"/>
## <h away="2" home="5"/>
## <e away="1" home="1"/>
## <hr away="0" home="1"/>
## <sb away="1" home="0"/>
## <so away="8" home="12"/>
## </linescore>
## <home_runs>
## <player id="608324" last="Bregman" first="Alex"
name_display_roster="Bregman" number="2" hr="1" std_hr="8" inning="3"
runners="0" team_code="hou"/>
## </home_runs>
## <winning_pitcher id="543521" last="McHugh" first="Collin"
name_display_roster="McHugh" number="31" era="4.86" wins="10"
losses="10"/>
## <losing_pitcher id="407793" last="Lackey" first="John"
name_display_roster="Lackey" number="41" era="3.35" wins="9"
losses="8"/>
## <save_pitcher id="571704" last="Giles" first="Ken" number="53"
name_display_roster="Giles" era="3.51" wins="2" losses="3" saves="10"
svo="13"/>
## <links mlbtv="bam.media.launchPlayer({calendar_event_id:'14-
448978-2016-09-10',media_type:'video'})"
wrapup="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&mode=
wrap&c_id=mlb"
home_audio="bam.media.launchPlayer({calendar_event_id:'14-448978-
2016-09-10',media_type:'audio'})"
away_audio="bam.media.launchPlayer({calendar_event_id:'14-448978-
2016-09-10',media_type:'audio'})"
home_preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&
;mode=preview&c_id=mlb"
away_preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&

```

```

;mode=preview&amp;c_id=mlb"
preview="/mlb/gameday/index.jsp?gid=2016_09_10_chnmlb_houmlb_1&amp;mode
=preview&amp;c_id=mlb" tv_station="FOX"/>
## <broadcast>
##   <home>
##     <tv>FOX</tv>
##     <radio>KBME 790, La Nueva 94.1 FM</radio>
##   </home>
##   <away>
##     <tv>FOX</tv>
##     <radio>670 The Score</radio>
##   </away>
## </broadcast>
## <game_media>
##   <media type="game" calendar_event_id="14-448978-2016-09-10"
start="2016-09-10T13:05:00-0400" title="CHC @ HOU" has_mlb_tv="true"
free="NO" enhanced="N" media_state="media_archive"
thumbnail="http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_th
_7_preview.jpg"/>
##   <media type="vpp" content_id="1155125783" topic_id=""
headline="Giles nails down the save"
thumbnail="http://mediadownloads.mlb.com/mlbam/2016/09/11/images/mlbf_1
155125783_th_43.jpg"/>
## </game_media>
##
<video_thumbnail>http://mediadownloads.mlb.com/mlbam/preview/chnhou_448
978_th_7_preview.jpg</video_thumbnail>
## <video_thumbnails>
##   <thumbnail scenario="7" width="124"
height="70">http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_t
h_7_preview.jpg</thumbnail>
##   <thumbnail scenario="37" width="160"
height="90">http://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_t
h_37_preview.jpg</thumbnail>
## </video_thumbnails>
## </game>

game.id<- xmlGetAttr(xmltop[[2]], "id")
game.id

## [1] "2016/09/10/chnmlb-houmlb-1"

game.venue<- xmlGetAttr(xmltop[[2]], "venue")
game.venue

## [1] "Minute Maid Park"

class(xmltop[[2]])

## [1] "XMLNode"          "RXMLAbstractNode" "XMLAbstractNode"
## [4] "oldClass"

```

```

class(gameNodes)

## [1] "list"

gameValues <- sapply(gameNodes,xmlValue)
gameValues

## [1] "FOXSN590FOXWEEI 93.7, WCCM 1110
AMhttp://mediadownloads.mlb.com/mlbam/preview/bostor_448977_th_7_previe
w.jpghttp://mediadownloads.mlb.com/mlbam/preview/bostor_448977_th_7_pre
view.jpghttp://mediadownloads.mlb.com/mlbam/preview/bostor_448977_th_37
_preview.jpg"
## [2] "FOXKBME 790, La Nueva 94.1 FMFOX670 The
Scorehttp://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_th_7_pre
view.jpghttp://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_th_7_
preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/chnhou_448978_th
_37_preview.jpg"
## [3] "CSCA95.7 FM The Game, KIQI 1010ROOTNW710
ESPNhttp://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/seaoak_448988_th_
37_preview.jpg"
## [4] "YES, MLBN (out-of-market only)WFAN 660/101.9 FM, WADO 1280Sun
Sports (Alt.), MLBN (out-of-market only)WDAE 620 AM /95.3 FM, WGES
680http://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_th_7_pr
evie.jpghttp://mediadownloads.mlb.com/mlbam/preview/tbanya_448989_th_3
7_preview.jpg"
## [5] "ROOTPITKDKA-FM 93.7FS-OWLW
700http://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_th_7_pr
evie.jpghttp://mediadownloads.mlb.com/mlbam/preview/cinpit_448979_th_3
7_preview.jpg"
## [6] "MASN106.7 The FanCSN-P94
WIPhttp://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_th_7_pr
evie.jpghttp://mediadownloads.mlb.com/mlbam/preview/phiwas_448986_th_3
7_preview.jpg"
## [7] "FS-D, MLBN (out-of-market only)97.1 The TicketMASN 2, MLBN
(out-of-market only)105.7 The Fan, Orioles Radio
Networkhttp://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/baldet_448976_th_
7_preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/baldet_448976_
th_37_preview.jpg"
## [8] "FSNOGo 96.3, TIBNSportsTime OhioWTAM 1100, WMMS 100.7, Indians
Radio
Networkhttp://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/clemin_448980_th_
7_preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/clemin_448980_
th_37_preview.jpg"

```

```
## [9] "CSN-CWLS 890, WRT0 1200FSKCKCSP 610,
RRNhttp://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_th_7_pr
evew.jpghttp://mediadownloads.mlb.com/mlbam/preview/kcacha_448982_th_3
7_preview.jpg"
## [10] "FS-F610 AM WIOD, WAQI 710SportsNet LA, SNLA Spanish570 LA
Sports, KTNQ 1020, KMPC
1540http://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_th_7_prev
iew.jpghttp://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/lanmia_448983_th_
37_preview.jpg"
## [11] "FSS0680 AM/93.7 FM, WYAY 106.7, Braves Radio NetworkWPIX710
WOR, ESPN Deportes
1050http://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_th_7_prev
iew.jpghttp://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/nynatl_448985_th_
37_preview.jpg"
## [12] "FS-MKMOX 1120, CRNFSWIWTMJ 620, Brewers Radio
Networkhttp://mediadownloads.mlb.com/mlbam/preview/milsln_448984_th_7_p
review.jpghttp://mediadownloads.mlb.com/mlbam/preview/milsln_448984_th_
7_preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/milsln_448984_
th_37_preview.jpg"
## [13] "FS-AArizona Sports 98.7 FM, KSUN La Mejor 1400CSBAKNBR
680http://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_th_7_previ
ew.jpghttp://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_th_7_pr
evew.jpghttp://mediadownloads.mlb.com/mlbam/preview/sfnari_448987_th_3
7_preview.jpg"
## [14] "FSSD, FOX Deportes San DiegoXPRS 1090, XEMO 860ROOTRMKOA 850
AMhttp://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_th_7_previe
w.jpghttp://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_th_7_pre
view.jpghttp://mediadownloads.mlb.com/mlbam/preview/colsdn_448981_th_37
_preview.jpg"
## [15] "FS-WKLAA 830, KWKW 1330FSSW105.3 The Fan, 1540am ESPN
Deporteshttp://mediadownloads.mlb.com/mlbam/preview/texana_448990_th_7_
preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/texana_448990_th
_7_preview.jpghttp://mediadownloads.mlb.com/mlbam/preview/texana_448990
_th_37_preview.jpg"
```

xmlToDataFrame()

This function can be used to extract data from an XML document (or sub-document) that has a simple, shallow structure that does appear reasonably commonly.

Usage

```
xmlToDataFrame(doc, colClasses = NULL, homogeneous = NA,
               collectNames = TRUE, nodes = list(),
               stringsAsFactors = default.stringsAsFactors())
```

Arguments

- `doc` - the XML content. This can be the name of a file containing the XML, the parsed XML document. If one wants to work on a subset of nodes, specify these via the `nodes` parameter.
- `colClasses` - a list/vector giving the names of the R types for the corresponding variables and this is used to coerce the resulting column in the data frame to this type. These can be named. This is similar to the `colClasses` parameter for `read.table`. If this is given as a list, columns in the data frame corresponding to elements that are NULL are omitted from the answer. This can be slightly complex to specify if the different nodes have the "variables" in quite different order as there is not a well defined order for the variables corresponding to `colClasses`.
- `homogeneous` - a logical value that indicates whether each of the nodes contains all of the variables (TRUE) or if there may be some nodes which have only a subset of them. The function determines this if the caller does not specify `homogeneous` or uses NA as the value. It is a parameter to allow the caller to specify this information and avoid these "extra" computations. If the caller knows this information it is more efficient to specify it.
- `collectNames` - a logical value indicating whether we compute the names by explicitly computing the union of all variable names or, if FALSE, we use the names from the node with the most children. This latter case is useful when the caller knows that there is at least one node with all the variables.
- `nodes` - a list of XML nodes which are to be processed
- `stringsAsFactors` - a logical value that controls whether character vectors are converted to factor objects in the resulting data frame.

```
beer.recipes <- xmlToDataFrame("http://beerxml.com/recipes.xml")
class(beer.recipes)

## [1] "data.frame"

head(beer.recipes)

##          NAME VERSION      TYPE    BREWER ASST_BREWER  BATCH_SIZE
## 1 Burton Ale      1 All Grain Brad Smith           18.92716800
## 2 Dry Stout      1 All Grain Brad Smith           18.92716800
## 3 Porter        1 All Grain Brad Smith           18.92716800
## 4 Wit           1 All Grain Brad Smith           19.68425500
##    BOIL_SIZE BOIL_TIME EFFICIENCY
## 1 20.81988500      60      72.0
## 2 20.81988500      60      72.0
## 3 18.92716800      60      72.0
## 4 19.68425500      60      75.0
##
HOPS
## 1 Goldings, East Kent1United Kingdom5.500.0283500Boil60.000Used For:
```

General purpose hops for bittering/finishing all British Ales\nAroma: Floral, aromatic, earthy, slightly sweet spicy flavor\nSubstitutes: Fuggles, BC Goldings\nExamples: Bass Pale Ale, Fullers ESB, Samuel Smith's Pale Ale\nAromaPellet3.5035.01.00 oz1.00 oz60 minNorthern Brewer1Germany7.500.0141750Boil60.000Also called Hallertauer Northern Brewers\nUse for: Bittering and finishing both ales and lagers of all kinds\nAroma: Fine, dry, clean bittering hop. Unique flavor.\nSubstitute: Hallertauer Mittelfrueh, Hallertauer\nExamples: Anchor Steam, Old Peculiar, BothPellet4.0035.00.50 oz0.50 oz60 minFuggles1United Kingdom5.000.0141750Boil12.000Used For: General purpose bittering/aroma for English Ales, Dark Lagers\nAroma: Mild, soft, grassy, floral aroma\nSubstitute: East Kent Goldings, Williamette\nExamples: Samuel Smith's Pale Ale, Old Peculiar, Thomas Hardy's AleAromaPellet2.0035.00.50 oz0.50 oz2 minFuggles1United Kingdom4.500.0212620Dry Hop4320.00Used For: General purpose bittering/aroma for English Ales, Dark Lagers\nAroma: Mild, soft, grassy, floral aroma\nSubstitute: East Kent Goldings, Williamette\nExamples: Samuel Smith's Pale Ale, Old Peculiar, Thomas Hardy's AleAromaPellet2.0035.00.75 oz0.75 oz3 days

2

Goldings, East Kent1United Kingdom5.000.0637860Boil60.000Used For: General purpose hops for bittering/finishing all British Ales\nAroma: Floral, aromatic, earthy, slightly sweet spicy flavor\nSubstitutes: Fuggles, BC Goldings\nExamples: Bass Pale Ale, Fullers ESB, Samuel Smith's Pale Ale\nAromaPellet3.5035.02.25 oz2.25 oz60 min

3

Fuggles1United Kingdom4.500.0566990Boil60.000Used For: General purpose bittering/aroma for English Ales, Dark Lagers\nAroma: Mild, soft, grassy, floral aroma\nSubstitute: East Kent Goldings, Williamette\nExamples: Samuel Smith's Pale Ale, Old Peculiar, Thomas Hardy's AleAromaPellet2.0035.02.00 oz2.00 oz60 min

4

Goldings, East Kent1United Kingdom5.000.0283500Boil60.000Used For: General purpose hops for bittering/finishing all British Ales\nAroma: Floral, aromatic, earthy, slightly sweet spicy flavor\nSubstitutes: Fuggles, BC Goldings\nExamples: Bass Pale Ale, Fullers ESB, Samuel Smith's Pale Ale\nAromaPellet3.5035.01.00 oz1.00 oz60 min

##

FERMENTABLES

1

Pale Malt (2 Row) UK1Grain3.62873678.02.5FALSEUnited KingdomBase malt for all English beer styles\nLower diastatic power than American 2 Row Pale Malt1.54.045.010.1100.0FALSE0.0008.00 lb8.00 lb1.0362.5 SRMCaramel/Crystal Malt - 20L1Grain0.45359275.020.0FALSEUSAdds body, color and improves head retention.\nAlso called "Crystal" malt.1.54.00.013.220.0FALSE0.0001.00 lb1.00 lb1.03520.0 SRMBrown Sugar, Light1Sugar0.453592100.08.0FALSEUSImparts a rich sweet flavor. Used in Scottish ales, holiday ales and some old ales.----10.0FALSE0.0001.00 lb1.00 lb1.0468.0 SRM

2

Pale Malt (2 Row) UK1Grain2.26796078.02.5FALSEUnited KingdomBase malt for all English beer styles\nLower diastatic power than American 2 Row Pale Malt1.54.045.010.1100.0FALSE0.0005.00 lb5.00 lb1.0362.5 SRMBarley, Flaked1Grain0.90718470.01.7FALSEUSAdds significant body to Porters and Stouts. High haze producing protein prevents use in light beers.1.59.00.013.520.0TRUE0.0002.00 lb2.00 lb1.0321.7 SRMBlack Barley (Stout)1Grain0.45359255.0500.0FALSEUSUnmalted barley roasted at high temperature to create a dry, coffee like flavor.\nImparts a sharp acrid flavor characteristic of dry stouts.\nGives "dryness" to a stout or porter -- much more so than regular Roasted

Barley1.55.00.013.210.0FALSE0.0001.00 lb1.00 lb1.025500.0 SRM
3 Pale Malt (2 Row) Bel1Grain3.62873680.03.2FALSEBelgiumBase malt for all beer styles\nHigher potential yield than US, English equivalent pale ale malts1.54.060.010.5100.0FALSE0.0008.00 lb8.00 lb1.0373.2 SRMBlack (Patent) Malt1Grain0.45359255.0500.0FALSEUSDark color and dry roasted flavor characteristic of Stouts and Porters\nUse for: Coloring in small amounts, or flavoring of Stouts and Porters in larger amounts.1.56.00.013.210.0FALSE0.0001.00 lb1.00 lb1.025500.0 SRMCaramel/Crystal Malt - 10L1Grain0.45359275.010.0FALSEUSAdds body, color and improves head retention.\nAlso called "Crystal" malt.1.54.00.013.220.0FALSE0.0001.00 lb1.00 lb1.03510.0 SRMChocolate Malt1Grain0.22679660.0350.0FALSEUSDark malt that gives a rich red or brown color and nutty flavor.\nUse for: Brown ales, porters, some stouts\nMaintains some malty flavor, not as dark as roasted malt.1.54.00.013.210.0FALSE0.0000.50 lb0.50 lb1.028350.0 SRMMunich Malt - 10L1Grain0.22679677.010.0FALSEUSMalty-sweet flavor characteristic and adds a slight orange color to the beer.\nDoes not contribute significantly to body or head retention.\nUse for: Bock, Porter, Marzen, Oktoberfest beers2.85.050.013.580.0FALSE0.0000.50 lb0.50 lb1.03510.0 SRM

4

Pale Malt (2 Row) Bel1Grain2.04116480.03.2FALSEBelgiumBase malt for all beer styles\nHigher potential yield than US, English equivalent pale ale malts1.54.060.010.5100.0FALSE0.0004.50 lb4.50 lb1.0373.2 SRMWheat, Flaked1Grain2.04116477.01.6FALSEUSFlaked wheat adds to increased body and foam retention\nUsed in place of raw or torrefied wheat for faster conversion and better yield.\nMay be used in small amounts to improve head retention and body\nExamples: Belgian White beer, Wit1.59.00.016.040.0TRUE0.0004.50 lb4.50 lb1.0351.6 SRM

##

MISCS

1 Irish Moss1FininingBoil0.00123210.000FALSEClarityFinining agent that aids in the post-boil protein break. Reduces protein chill haze and improves beer clarity.0.25 tsp0.00 tsp10.0 min5.00 galPolyclar1FininingSecondary0.0073931440.000FALSEChill HazePlastic powder that reduces chill haze by removing tannins and proteins. Add to secondary after yeast has settled. Amounts vary by manufacturer -- check instructions before adding. Do not boil.0.25 oz0.00 oz1.0 days5.00 gal

2

Irish

Moss1FiningBoil0.00123210.000FALSEClarityFining agent that aids in the post-boil protein break. Reduces protein chill haze and improves beer clarity.0.25 tsp0.00 tsp10.0 min5.00 galGypsum (Calcium Sulfate)1Water AgentMash0.01000060.000TRUEWater AgentReduces PH of water for mashing and sparging. Alters water profile -- used to harden soft water. Use the BeerSmith Water Profile tool to determine amount to add.10.00 gm0.00 gm60.0 min5.00 gal

3 Irish

Moss1FiningBoil0.00123210.000FALSEClarityFining agent that aids in the post-boil protein break. Reduces protein chill haze and improves beer clarity.0.25 tsp0.00 tsp10.0 min5.00 galGypsum (Calcium Sulfate)1Water AgentMash0.01000060.000TRUEWater AgentReduces PH of water for mashing and sparging. Alters water profile -- used to harden soft water. Use the BeerSmith Water Profile tool to determine amount to add.10.00 gm0.00 gm60.0 min5.00 gal

4 Coriander

Seed1SpiceBoil0.0221805.000FALSEBelgian WitUsed in Belgian Wit, Whites, and Holiday ales. Very good when used in light wheat ales. Often used with Bitter Orange Peel.0.75 oz0.00 oz5.0 min5.00 galOrange Peel, Bitter1SpiceBoil0.0221805.000FALSEBelgian WitMade from the Curaco Orange Peel, peels are green-gray in color. Used to add a distinctive flavor to Belgian Wits and White beers.0.75 oz0.00 oz5.0 min5.00 gal

##

YEASTS

1

Burton Ale1AleLiquid0.0350130FALSEWhite LabsWLP02320.000022.7778Medium72.0Burton-on-trent yeast produces a complex character. Flavors include apple, pear, and clover honey.All English styles including Pale Ale, IPA, Porter, Stout and Bitters.50FALSE35 ml68.0 F73.0 F0 Pkgs7/6/2003

2

Irish Ale1AleLiquid0.1250480FALSEWyeast Labs108416.666722.2222Medium73.0Dry diacetyl, fruity flavor characteristic of stouts. Full bodied, dry, clean flavor.Irish Dry Stouts, Porter, Scottish Ale, Brown Ale, Imperial Stout, Barley Wine50FALSE125 ml62.0 F72.0 F0 Pkgs7/6/2003

3 English Ale1AleLiquid0.0350130FALSEWhite

LabsWLP00218.333320.0000Very High66.5Classic ESB strain best for English style milds, bitters, porters and English style stouts. Leaves a clear beer with some residual sweetness.English Pale Ale, ESB, India Pale Ale, Brown Ale, Porter, Sweet Stouts and Strong Ales50FALSE35 ml65.0 F68.0 F0 Pkgs7/6/2003

4

Belgian Wit Ale1WheatLiquid0.0350130FALSEWhite LabsWLP40019.444423.3333Low76.0Phenolic and tart. The original yeast used to produce Wit in Belgium.Belgian Wit50FALSE35 ml67.0 F74.0 F0 Pkgs7/6/2003

##

WATERS

1 Burton On Trent,

UK118.927168295.0300.0725.025.055.045.08.0Distinctive pale ales strongly hopped. Very hard water accentuates the hops flavor.\nExample: Bass Ale5.00 gal

2 Dublin, Ireland118.927168115.0200.055.019.012.04.08.0Irish ale water - used for dark, malty strong ales with medium bitterness. Famous for dry stouts.5.00 gal

3
\n

4
\n

STYLE

1 English Pale Ale1Bitter & English Pale Ale1ABJCP
1999Ale1.043000001.060000001.010000001.0200000020.040.06.0000000012.00000001.52.4>5.54.5Famous style from Burton-on-Trent. Stronger body than ordinary bitter, but slightly less bitter. A balanced, easy drinking beer that is malty and strong but not overbearing. Medium to full body, with medium to high bitterness and hop aroma. Dry with a defined hop flavor. Golden to copper color. Crystal malt evident. Low carbonation for kegs, medium for bottled version.English malt. Crystal malt. English hops. Water with high Calcium Sulfate (gypsum) profile enhances bitterness perception (i.e. famous Burton-on-Trent Water)Bass Pale Ale, Whitbread Pale Ale, Royal Oak1.043 SG1.060 SG1.010 SG1.020 SG6.0 SRM12.0 SRM1.043-1.060 SG1.010-1.020 SG20.0-40.0 IBU1.5-2.4 vols6.0-12.0 SRM4.5-5.5 %

2 Dry Stout (Irish)1Stout1ABJCP
1999Ale1.036000001.050000001.007000001.0120000030.050.035.00000000200.00000001.62.1>5.53.0Famous Irish Stout (AKA Guinness). Dry roasted almost coffee like flavor. Irish versions have low starting gravity. Often mixed with soured, pasturized beer to give a slight acidity as well.Full body perception from Flaked Barley, though starting gravity may be low. Dry roasted flavor. Generous hops, though malt flavor will dominate. Complex fruity flavor. Black opaque color.English malt. Roasted Barley and Flaked Barley for all grain. Some chocolate or black patent used in extract recipes. Goldings or Fuggles hops. Low sulfate, high calcium water.Guinness Stout1.036 SG1.050 SG1.007 SG1.012 SG35.0 SRM200.0 SRM1.036-1.050 SG1.007-1.012 SG30.0-50.0 IBU1.6-2.1 vols35.0-200.0 SRM3.0-5.5 %

3
Robust Porter1Porter15ABJCP
1999Ale1.050000001.065000001.012000001.0160000025.045.030.0000000060.00000001.82.5>6.04.8Stronger, darker version of porter with a slight dryness. Flavor derived from chocolate and black malts, but lacks the strong roasted flavor of a dry stout. Medium to full body, slightly dry. Well balanced, low to medium malt flavor and hop bitterness. Dark brown to black color. Medium to no hop flavor. Low ester, fruitiness, diacytl. Low to med carbonation.English malt. Dark Crystal, chocolate and black or roast malt. Traditional english ale hops and yeast. Moderate carbonate water.Sierra Nevada Porter, Anchor Porter1.050

SG1.065 SG1.012 SG1.016 SG30.0 SRM60.0 SRM1.050-1.065 SG1.012-1.016
 SG25.0-45.0 IBU1.8-2.5 vols30.0-60.0 SRM4.8-6.0 %
 ## 4 Witbier1Belgian & French
 Ale1ABJCP
 1999Ale1.044000001.055000001.008000001.0120000015.025.02.000000004.0000
 00002.12.7>5.54.1Distinctive Wit or "White" beer spiced with bitter
 Curacao orange peel and coriander. A distinctive yeast strain provides
 orange aroma/flavor.Light to medium body. Unmalted wheat adds body and
 distinctive flavor. Large white head. Low hop bitterness and flavor.
 Pale yellow color. Moderate carbonation. Some chill haze is OK.Belgian
 pale malt. Up to 50% unmalted wheat (torrified or flaked often used).
 5-10% flaked or rolled oats. Noble hops (Hallertauer or Saaz). Wit
 yeast. Curaco bitter orange peel and coriander. Soft water.Celis White,
 Wieckse Witte1.044 SG1.055 SG1.008 SG1.012 SG2.0 SRM4.0 SRM1.044-1.055
 SG1.008-1.012 SG15.0-25.0 IBU2.1-2.7 vols2.0-4.0 SRM4.1-5.5 %
 ##
 EQUIPMENT
 ## 1 Brew Pot (6+gal) and Igloo/Gott Cooler (5
 Gal)122.7056690018.92716818.927168001.8143680.3000.000000000.946358009.
 060.0FALSE0.946358000.00000000100.0Popular all grain setup. 5 Gallon
 Gott or Igloo cooler as mash tun with false bottom, and 7-9 gallon
 brewpot capable of boiling at least 6 gallons of wort. Primarily used
 for single infusion mashes.6.00 gal5.00 gal5.00 gal4.00 lb0.00 gal0.25
 gal0.25 gal0.00 gal
 ## 2 Brew Pot (6+gal) and Igloo/Gott Cooler (5
 Gal)122.7056690018.92716818.927168001.8143680.3000.000000000.946358009.
 060.0FALSE0.946358000.00000000100.0Popular all grain setup. 5 Gallon
 Gott or Igloo cooler as mash tun with false bottom, and 7-9 gallon
 brewpot capable of boiling at least 6 gallons of wort. Primarily used
 for single infusion mashes.6.00 gal5.00 gal5.00 gal4.00 lb0.00 gal0.25
 gal0.25 gal0.00 gal
 ## 3 Brew Pot (6+gal) and Igloo/Gott Cooler (5
 Gal)122.7056690018.92716818.927168001.8143680.3000.000000000.946358009.
 060.0FALSE0.946358000.00000000100.0Popular all grain setup. 5 Gallon
 Gott or Igloo cooler as mash tun with false bottom, and 7-9 gallon
 brewpot capable of boiling at least 6 gallons of wort. Primarily used
 for single infusion mashes.6.00 gal5.00 gal5.00 gal4.00 lb0.00 gal0.25
 gal0.25 gal0.00 gal
 ## 4 Brew Pot (6+gal) and Igloo/Gott Cooler (5
 Gal)122.7056690018.92716818.927168001.8143680.3000.000000000.946358009.
 060.0FALSE0.946358000.00000000100.0Popular all grain setup. 5 Gallon
 Gott or Igloo cooler as mash tun with false bottom, and 7-9 gallon
 brewpot capable of boiling at least 6 gallons of wort. Primarily used
 for single infusion mashes.6.00 gal5.00 gal5.00 gal4.00 lb0.00 gal0.25
 gal0.25 gal0.00 gal
 ##
 MASH
 ## 1
 Single Infusion, Full
 Body122.2222220022.2222220075.555556005.41.814368000.30000000FALSE72.0

```

F72.0168.0 F4.00 lbMash
In1Infusion10.6465324570.00000000270.00000000Add 11.25 qt of water at
170.5 F1.250.00 qt170.5 FDISPLAY_STEP_TEMP11.25 qtMash
Out1Infusion6.8137801075.55555600275.55555600Add 7.20 qt of water at
185.9 F2.050.00 qt185.9 FDISPLAY_STEP_TEMP7.20 qt
## 2
Single Infusion, Medium
Body122.2222220022.2222220075.555556005.41.814368000.30000000FALSE72.0
F72.0168.0 F4.00 lbMash In1Infusion9.4635846067.77777800267.77777800Add
10.00 qt of water at 165.9 F1.250.00 qt165.9 FDISPLAY_STEP_TEMP10.00
qtMash Out1Infusion6.0566941075.55555600275.55555600Add 6.40 qt of
water at 193.1 F2.050.00 qt193.1 FDISPLAY_STEP_TEMP6.40 qt
## 3
Single Infusion, Medium
Body122.2222220022.2222220075.555556005.41.814368000.30000000FALSE72.0
F72.0168.0 F4.00 lbMash
In1Infusion13.0124286067.77777800267.77777800Add 13.75 qt of water at
165.9 F1.250.00 qt165.9 FDISPLAY_STEP_TEMP13.75 qtMash
Out1Infusion8.3279541075.55555600275.55555600Add 8.80 qt of water at
193.1 F2.050.00 qt193.1 FDISPLAY_STEP_TEMP8.80 qt
## 4 Single Infusion, Medium
Body122.2222220022.2222220075.555556005.41.814368000.30000000FALSESimpl
e single infusion mash for use with most modern well modified grains
(about 95% of the time).72.0 F72.0168.0 F4.00 lbMash
In1Infusion10.6465326067.77777800267.77777800Add 11.25 qt of water at
165.9 F1.250.00 qt165.9 FDISPLAY_STEP_TEMP11.25 qtMash
Out1Infusion5.9620581075.55555600275.55555600Add 6.30 qt of water at
196.6 F1.950.00 qt196.6 FDISPLAY_STEP_TEMP6.30 qt
##
NOTES
## 1
## 2 A very simple all grain beer that produces a great Guinness-style
taste every time. So light in body that I have even made black and
tans with it using a full body pale ale in the bottom of the glass.
## 3
## 4
Many thanks to Jay Russ for starting me on Wit - and providing some
starter recipes from which this one eventually evolved!
##
TASTE_NOTES
## 1 A smooth tasting pale ale -- full in body and a great long lasting
head. Another great beer to stock -- favorite with guests. Make's a
great black and tan when combined with light bodied Irish stout.
## 2 One of
my favorite stock beers - I always keep a keg on hand. Rich flavored
dry Irish Stout that is very simple to make. Perfect every time!
## 3
Smooth tasting complex English porter. A bit on the "robust" side.
## 4
Great tasting Wit! A summer favorite! Lacy white head that lasts and

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lasts. Distinctive, light wheat beer with a hint of spice.

##	TASTE_RATING	OG	FG	CARBONATION	FERMENTATION_STAGES
## 1	38.0	1.05400000	1.01500000	2.4	2
## 2	44.0	1.03800000	1.01200000	2.3	2
## 3	40.0	1.05400000	1.01800000	2.3	2
## 4	47.0	1.04700000	1.01300000	2.4	2

##	PRIMARY_AGE	PRIMARY_TEMP	SECONDARY_AGE	SECONDARY_TEMP	TERTIARY_AGE
## 1	4	20.000	7	20.000	0
## 2	4	20.000	7	20.000	0
## 3	4	20.000	7	20.000	0
## 4	4	20.000	7	20.000	0

##	AGE_TEMP	CARBONATION_USED	DATE	EST_OG	EST_FG	EST_COLOR
## 1	11.111	12 PSI	4/6/2003	1.056 SG	1.015 SG	7.0 SRM
## 2	5.000	-	4/1/2003	1.039 SG	1.010 SG	35.9 SRM
## 3	11.111	-	4/16/2003	1.056 SG	1.018 SG	44.9 SRM
## 4	11.111	-	4/17/2003	1.047 SG	1.011 SG	4.0 SRM

##	IBU_METHOD	EST_ABV	ABV	ACTUAL_EFFICIENCY	CALORIES
## 1	Tinseth	5.3 %	5.1 %	69.7 %	242 cal/pint
## 2	Tinseth	3.7 %	3.4 %	70.6 %	168 cal/pint
## 3	Tinseth	4.9 %	4.7 %	70.0 %	244 cal/pint
## 4	Tinseth	4.7 %	4.4 %	75.2 %	209 cal/pint

##	DISPLAY_BATCH_SIZE	DISPLAY_BOIL_SIZE	DISPLAY_OG	DISPLAY_FG
## 1	5.00 gal	5.50 gal	1.054 SG	1.015 SG
## 2	5.00 gal	5.50 gal	1.038 SG	1.012 SG
## 3	5.00 gal	5.00 gal	1.054 SG	1.018 SG
## 4	5.20 gal	5.20 gal	1.047 SG	1.013 SG

##	DISPLAY_PRIMARY_TEMP	DISPLAY_SECONDARY_TEMP	DISPLAY_TERTIARY_TEMP
## 1	68.0 F	68.0 F	68.0 F
## 2	68.0 F	68.0 F	68.0 F
## 3	68.0 F	68.0 F	68.0 F
## 4	68.0 F	68.0 F	68.0 F

##	DISPLAY_AGE_TEMP
## 1	52.0 F
## 2	41.0 F
## 3	52.0 F
## 4	52.0 F