

POSIX

- From Wiki:
- “The **Portable Operating System Interface (POSIX)**^[1] is a family of [standards](#) specified by the [IEEE Computer Society](#) for maintaining compatibility between [operating systems](#).”
- Date/time in R are stored in POSIX date classes
 - Stores time to the nearest second
 - More accurate representation

POSIX

- Two POSIX date/time classes
 - POSIXct
 - POSIXlt
- POSIXct
 - Internally stores as numeric
 - Date/time as the # of days since Jan 1, 1970
- POSIXlt
 - Stores as list
 - Second, minute, hour, day, month, year among others

POSIX

- R default choice is POSIXct
- Example POSIX date/time inputs
 - 1915/6/16
 - 2005-06-24 11:25
 - 1990/2/17 12:20:05

Conversion

- If the input times correspond to one of the previous date/time formats, you can use

`as.POSIXct` directly

```
mts = c("2005-10-21 18:47:22", "2005-12-24 16:39:58",  
+       "2005-10-28 07:30:05 PDT")
```

```
as.POSIXlt(mts)
```

POSIX

- Two important functions
 - `strptime` (for inputting dates) and `strftime` (for formatting dates as outputs)
- `mydate =`
`strptime('16/Oct/2005:07:51:00',format='%d/%b/%Y:%H:%M:%S')`
- Most of this page examples were gleaned from
 - <https://www.stat.berkeley.edu/~s133/dates.html>