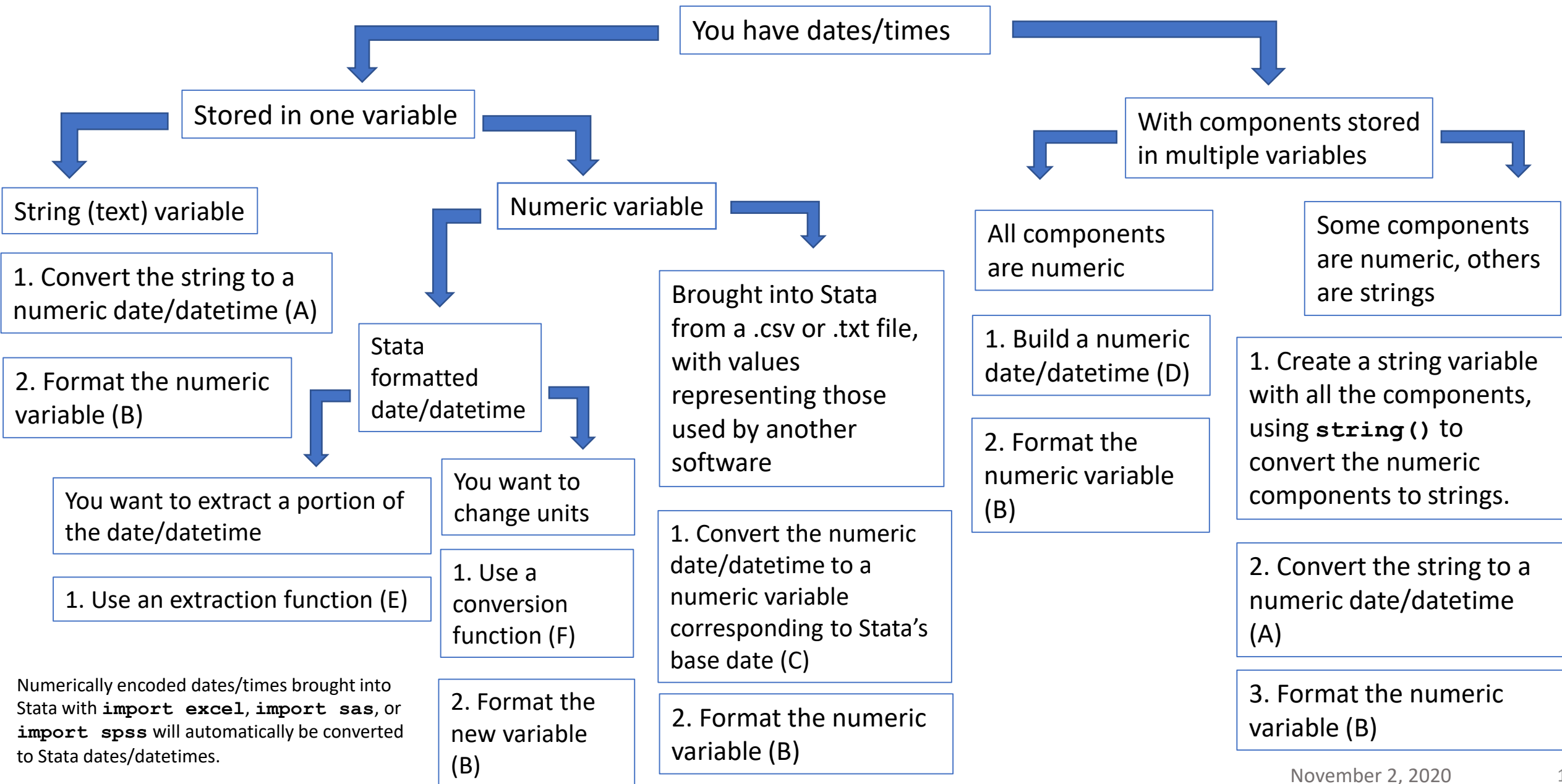


Working with dates and times in Stata



Units of measurement

<u>Date type</u>	<u>Units</u>
Datetime	Milliseconds since 01jan1960 00:00:00.000 (assumes 86,400 s/day)
Datetime(UTC)	Milliseconds since 01jan1960 00:00:00.000 (adjusted for leap seconds)
Daily date	Days since 01jan1960
Weekly date	Weeks since 1960w1
Monthly date	Months since 1960m1
Quarterly date	Quarters since 1960q1

A. String-to-numeric conversions

<u>Date type</u>	<u>Function</u>
Datetime	clock (<i>string</i> , "mask")
Datetime(UTC)	Clock (<i>string</i> , "mask")
Daily date	date (<i>string</i> , "mask")
Weekly date	weekly (<i>string</i> , "mask")
Monthly date	monthly (<i>string</i> , "mask")
Quarterly date	quarterly (<i>string</i> , "mask")

mask specifies the order of the date and time components, and may contain any of the following: **M, D, Y, 19Y, 20Y, Q, W, h, m, s**, and **#**.

B. Display formats

<u>Date type</u>	<u>Format</u>
Datetime	%tc
Datetime(UTC)	%tC
Daily date	%td
Weekly date	%tw
Monthly date	%tm
Quarterly date	%tq

C. Converting dates and times from other software

SAS	Date	sasdate==statadate
	Datetime	sastime*1000
SPSS	Date	dofc((spsstime*1000) + tc(14oct1582 00:00))
	Datetime	(spsstime*1000) + tc(14oct1582 00:00)
R	Date	rdate - td(01jan1970)
	Datetime	rtime-tC(01jan1970 00:00)
Excel	Date	xldate + td(30dec1899)
	Datetime	round((xltime+td(30dec1899))*86400)*1000

D. Building dates and times from components

<u>Date type</u>	<u>Function</u>
Datetime	mdyhms (<i>M, D, Y, h, m, s</i>)
	dhms (<i>e_d, h, m, s</i>)
	hms (<i>h, m, s</i>)
Datetime(UTC)	Cmdyhms (<i>M, D, Y, h, m, s</i>)
	Cdhms (<i>e_d, h, m, s</i>)
	Chms (<i>h, m, s</i>)
Daily date	mdy (<i>M, D, Y</i>)
Weekly date	yw (<i>Y, W</i>)
Monthly date	ym (<i>Y, M</i>)
Quarterly date	yq (<i>Y, Q</i>)

e_d is a numerically encoded daily date.

E. Extraction functions

<u>Component</u>	<u>Function</u>
Year	year (<i>e_d</i>)
Month	month (<i>e_d</i>)
Day	day (<i>e_d</i>)
Day of week	dow (<i>e_d</i>)
Week w/in year	week (<i>e_d</i>)
Quarter w/in year	quarter (<i>e_d</i>)

e_d is a numerically encoded daily date.

<u>Component</u>	<u>Function</u>	<u>Function</u>
Hour of day	hh (<i>e_tc</i>)	hh (<i>e_tC</i>)
Minutes of day	mm (<i>e_tc</i>)	mm (<i>e_tC</i>)
Seconds of day	ss (<i>e_tc</i>)	ss (<i>e_tC</i>)

e_tc is a datetime variable and *e_tC* is a leap second-adjusted datetime (UTC) variable.

F. Converting among units

From	To		
	Datetime	Datetime (UTC)	Daily date
Datetime		Cofc()	dofc()
Datetime (UTC)	cofC()		dofC()
Daily date	cofd()	Cofd()	

From	To			
	Daily date	Weekly date	Monthly date	Quarterly date
Daily date		wofd()	mofd()	qofd()
Weekly date	dofw()		mofd(dofw())	qofd(dofw())
Monthly date	dofm()	wofd(dofm())		qofd(dofm())
Quarterly date	dofq()	wofd(dofq())	mofd(dofq())	