Information/Resources on Time Zone Data

Note: All of the below resources have been confirmed be in the public domain/Creative Commons licensing.

Java In-built
Java has maintained its own timezone database, updated whenever timezone rules change. With Java 8 a new DATE TIME API was introduced that can help converting timezones. (Link: https://docs.oracle.com/javase/tutorial/datetime/)

Time Zone DB:
A resource that provides multiple CSVs containing time zone-relevant information in spreadsheet for, including information on country names, country codes, zone names, zone ID numbers, abbreviations (such as ACST), GMT offset, boolean for whether DST is observed, etc. (Link: https://timezonedb.com/download)

IANA Time Zone Database:
The information in this database looks to be the most extensive - it results from a collaborative compilation of information and is primarily intended for use with computer programs and operating systems. However, the drawback is that the information I could find is kept in a ton a txt files. (Link: https://www.iana.org/time-zones)

Joda-Time:
In addition to the timezone information bundled with the Java Platform, Joda-TIme library is an alternative used by programmers that includes its own timezone data based on the IANA time zone database. The documentation looks pretty solid, however it looks like since Java 8 was released it is now recommended to use the new java.time instead. (Link: https://www.joda.org/joda-time/)

General Notes on Time-Conversion:
Conversion between time zones obeys the relationship:

"time in zone A" − "UTC offset for zone A" = "time in zone B" − "UTC offset for zone B",

in which each side of the equation is equivalent to UTC. (The more familiar term "UTC offset" is used here rather than the term "zone designator" used by the standard.)

The conversion equation can be rearranged to:

"time in zone B" = "time in zone A" − "UTC offset for zone A" + "UTC offset for zone B".

For example, the New York Stock Exchange opens at 09:30 (EST, UTC offset=−05:00). In Los Angeles (PST, UTC offset= −08:00) and Delhi (IST, UTC offset= +05:30), the New York Stock Exchange opens at
time in Los Angeles = 09:30 − (−05:00) + (−08:00) = 06:30.
time in Delhi = 09:30 − (−05:00) + (+05:30) = 20:00.

These calculations become more complicated near a daylight saving boundary (because the UTC offset for zone X is a function of the UTC time).

Information on Daylight Savings Time:

https://www.timeanddate.com/time/dst/2018.html

- Additionally, it should be noted that we may need to add additional time-zones for areas that observe daylight savings time. For example, PST has a different time zone name during daylight savings, becoming PDT instead. This name-change appears to happen for all the other zones that change (can be observed in chart below that EST is currently called EDT, etc).

There are currently 37 different time zones in use:

UTC Offset	Locations	Example Name	Example Location
UTC +14	Samoa and Christmas Island/Kiribati	LINT	Kiritimati
UTC +13:45	Chatham Islands/New Zealand	CHADT	Chatham Islands
UTC +13	New Zealand with exceptions and 4 more	NZDT	Auckland
UTC +12	Fiji, small region of Russia and 6 more	ANAT	Anadyr
UTC +11	much of Australia and 7 more	AEDT	Melbourne
UTC +10:30	small region of Australia	ACDT	Adelaide
UTC +10	Queensland/Australia and 6 more	AEST	Brisbane
UTC +9:30	Northern Territory/Australia	ACST	Darwin
UTC +9	Japan, South Korea and 5 more	JST	Tokyo
UTC +8:45	Western Australia/Australia	ACWST	Eucla
UTC +8	China, Philippines and 11 more	CST	Beijing

UTC +7	much of Indonesia, Thailand and 7 more	WIB	Jakarta
UTC +6:30	Myanmar and Cocos Islands	MMT	Yangon
UTC +6	Bangladesh and 6 more	BST	Dhaka
UTC +5:45	Nepal	NPT	Kathmandu
UTC +5:30	India and Sri Lanka	IST	New Delhi
UTC +5	Pakistan and 8 more	UZT	Tashkent
UTC +4:30	Iran and Afghanistan	IRDT	Tehran
UTC +4	Azerbaijan and 8 more	GST	Dubai
UTC +3	Greece and 37 more	MSK	Moscow
UTC +2	Germany and 47 more	CEST	Brussels
UTC +1	United Kingdom and 22 more	BST	London
UTC +0	Iceland and 17 more	GMT	Accra
UTC -1	Cabo Verde	CVT	Praia
UTC -2	most of Greenland and 3 more	WGST	Nuuk
UTC -2:30	Newfoundland and Labrador/Canada	NDT	St. John's
UTC -3	most of Brazil, Argentina and 9 more	ART	Buenos Aires
UTC -4	regions of USA and 32 more	EDT	New York

UTC -5	regions of USA and 10 more	CDT	Chicago
UTC -6	small region of USA and 9 more	CST	Mexico City
UTC -7	regions of USA and 2 more	PDT	Los Angeles
UTC -8	Alaska/USA and 2 more	AKDT	Anchorage
UTC -9	Alaska/USA and regions of French Polynesia	HDT	Adak
UTC -9:30	Marquesas Islands/French Polynesia	MART	Taiohae
UTC -10	Hawaii/USA and 2 more	HST	Honolulu
UTC -11	American Samoa and 2 more	NUT	Alofi
UTC -12	much of US Minor Outlying Islands	AoE	Baker Island