SOLARIX: SOLAR UNIX CALENDAR DOCUMENTATION

Last Update: SLX(52/001) | SLX(52/1/1)

SOLARIX: SOLAR UNIX CALENDAR, is an open source, non-profit, solar system based calendar project, named in Honor to the Solar System where Humanity begun and the Unix Epoch, following most of the GMT/UTC standards, that pretends to unify, simplify, modernize, standardized and globalize a way more intuitive and easy to read calendar with minimal impact in translation and adaptation. A calendar is a widely used tool to plan and predict events in our daily life so we should have a simpler tool, avoiding the hassle and asymmetry of the Gregorian Calendar mainly due the lack of uniformity in its months, without the need of renewing it every single year, which has caused us endless headaches the same way the Imperial System still does. It's free, easy to use, symmetrical, uses names with way more sense, a single printed calendar is worth for centuries or even millennia, plus it is computationally lighter than other calendars, so it could really have a big positive impact on environmental care.

Every year have fourteen (14) periods, 13 months of exactly 28 days, with 7 days per week, plus a Leap Period of 1 or 2 days at the end of the year, matching the Traditional Gregorian Leap Years.

Flat Ordinal Format (Basic Format)	Classic Monthly Format (Also Valid)
SLX(YEAR/DAY) HH:MM:SS::MS	SLX(YYY/MMM/DDD) HH:MM:SS::MS
SLX(50/366) 23:45:59::999	SLX(50/14/2) 23:45:59::999

(Similar to ISO-8601 Ordinal Date -1969 years)

This way the impact in daily life is very little, every day of the week corresponds to the same ordinal number every single month, every single year and forever (at least until our sun turns into a red giant star, inevitably destroying our planet), but just one or two leap days at the end of the year in order to synchronize with the non-integer translation/rotation rate of earth around the Sun, which equals to (365 + 1⁄4 − 1⁄100 + 1⁄400) or 365,2425 rotations of the earth around its vertical axis per each complete rotation around the Sun.

Common years, also called Solar Years (or a Sun's Year), have a 365th day called Sunday. Leap years, also called Lunar Years (or a Moon's Year), have both 365th Sunday plus a 366th day called Moonday, in the same way Gregorian Calendar adds a February 29, but at the end of the year, matching exactly with the Traditional Gregorian Leap Years in order to make the adaptation very easy and smooth with a simple algorithm to calculate a leap year:

(Solarix Year +1969)
IF (year is not divisible by 4) THEN (it is a Sun's Year / Common Year)
ELSE IF (year is not divisible by 100) THEN (it is a Moon's Year / Leap Year)
ELSE IF (year is not divisible by 400) THEN (it is a Sun's Year / Common Year)
ELSE (it is a Moon's Year / Leap Year)

It's GMT/UTC based and regularly synced with the international standards. The GMT/UTC Standard was set in 1970/01/01 as the first Universal Time Coordinated, also known as UNIX EPOCH, we selected such day as our first calendar day, our zero coordinates in time, the SOLARIX 1/1/1, so for example:

GREGORIAN: 1970/01/01 (Common Year) == SLX(1/1) (Sun's Year)
GREGORIAN: 2020/12/31 (Leap Year) == SLX(51/366) (Moon's Year)

CONSTANTS

```
const ms_in_1sec = (1000); // 1.000 ms.
const ms_in_1min = (1000 * 60); // 60.000 ms.
const ms_in_1hour = (1000 * 60 * 60); // 3'600.000 ms.
const ms_in_1day = (1000 * 60 * 60 * 24); // 86'400.000 ms.
const ms_in_1week = (1000 * 60 * 60 * 24 * 7); // 604'800.000 ms.
const ms_in_1month = (1000 * 60 * 60 * 24 * 7 * 4); // 2.419'200.000 ms.
const ms_in_13months = (1000 * 60 * 60 * 24 * 7 * 4 * 13); // 31.449'600.000 ms.
const ms_in_full_year = (31557600000); // 31,557'600,000 ms.
const sun_year_leap = (108000000); // 108'000.000 ms (Approx 1 Day) // Common Year just +Sunday.
const moon_year_leap = (172800000); // 172'800.000 ms (Approx 2 Days) // Leap Year = +Sunday +Moonday.
```

NUMBER	ISO MONTHS	ISO3	ISO2	ISO1
1	Unath	UNA	UN	A
2	Duath	DUA	DU	B
3	Triath	TRI	TR	C
4	Quadtath	QUA	QU	D
5	Pentath	PEN	PE	E
6	Sixtith	SIX	SI	F
7	Septeth	SEP	SE	G
8	Octoth	OCT	OC	H
9	Novtath	NOV	NO	I
10	Dekath	DEK	DK	J
11	Dekaunath	DUN	DU	K
12	Dekaduath	DDU	DD	L
13	Dekatriath	DTR	DT	M
14	*Leap*	*LEAP*	*LP*	*N*

NUMBER	ISO DAYS	ISO3	ISO2	ISO1
1	Mercuryday	MER	ME	a
2	Venusday	VEN	VE	b
3	Earthday	EAR	EA	c
4	Marsday	MAR	MA	d
5	Jupiterday	JUP	JU	e
6	Saturnday	SAT	SA	f
7	Uranusday	URA	UR	g

FLAT ORDINAL FORMAT

Unath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 1	2 2	3 3	4 4	5 5	6 6	7 7
8 8	9 9	10 10	11 11	12 12	13 12	14 14
15 15	16 16	17 17	18 18	19 19	20 20	21 21
22 22	23 23	24 24	25 25	26 26	27 27	28 28

Duath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
29 1	30 2	31 3	32 4	33 5	34 6	35 7
36 8	37 9	38 10	39 11	40 12	41 12	42 14
43 15	44 16	45 17	46 18	47 19	48 20	49 21
50 22	51 23	52 24	53 25	54 26	55 27	56 28

Triath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
57 1	58 2	59 3	60 4	61 5	62 6	63 7
64 8	65 9	66 10	67 11	68 12	69 12	70 14
71 15	72 16	73 17	74 18	75 19	76 20	77 21
78 22	79 23	80 24	81 25	82 26	83 27	84 28

Quadtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
85 1	86 2	87 3	88 4	89 5	90 6	91 7
92 8	93 9	94 10	95 11	96 12	97 12	98 14
99 15	100 16	101 17	102 18	103 19	104 20	105 21
106 22	107 23	108 24	109 25	110 26	111 27	112 28

Pentath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
113 1	114 2	115 3	116 4	117 5	118 6	119 7
120 8	121 9	122 10	123 11	124 12	125 13	126 14
127 15	128 16	129 17	130 18	131 19	132 20	133 21
134 22	135 23	136 24	137 25	138 26	139 27	140 28

Sixtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
141 1	142 2	143 3	144 4	145 5	146 6	147 7
148 8	149 9	150 10	151 11	152 12	153 12	154 14
155 15	156 16	157 17	158 18	159 19	160 20	161 21
162 22	163 23	164 24	165 25	166 26	167 27	168 28

Septeth

Merc	Ven	Earth	Mars	Jup	Sat	Ura
169 1	170 2	171 3	172 4	173 5	174 6	175 7
176 8	177 9	178 10	179 11	180 12	181 12	182 14
183 15	184 16	185 17	186 18	187 19	188 20	189 21
190 22	191 23	192 24	193 25	194 26	195 27	196 28

Octoth

Merc	Ven	Earth	Mars	Jup	Sat	Ura
197 1	198 2	199 3	200 4	201 5	202 6	203 7
204 8	205 9	206 10	207 11	208 12	209 12	210 14
211 15	212 16	213 17	214 18	215 19	216 20	217 21
218 22	219 23	220 24	221 25	222 26	223 27	224 28

Novtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
225 1	226 2	227 3	228 4	229 5	230 6	231 7
232 8	233 9	234 10	235 11	236 12	237 12	238 14
239 15	240 16	241 17	242 18	243 19	244 20	245 21
246 22	247 23	248 24	249 25	250 26	251 27	252 28

Dekath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
253 1	254 2	255 3	256 4	257 5	258 6	259 7
260 8	261 9	262 10	263 11	264 12	265 12	266 14
267 15	268 16	269 17	270 18	271 19	272 20	273 21
274 22	275 23	276 24	277 25	278 26	279 27	280 28

Dekaunath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
281 1	282 2	283 3	284 4	285 5	286 6	287 7
288 8	289 9	290 10	291 11	292 12	293 12	294 14
295 15	296 16	297 17	298 18	299 19	300 20	301 21
302 22	303 23	304 24	305 25	306 26	307 27	308 28

Dekaduath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
309 1	310 2	311 3	312 4	313 5	314 6	315 7
316 8	317 9	318 10	319 11	320 12	321 12	322 14
323 15	324 16	325 17	326 18	327 19	328 20	329 21
330 22	331 23	332 24	333 25	334 26	335 27	336 28

Dekatriath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
337 1	338 2	339 3	340 4	341 5	342 6	343 7
344 8	345 9	346 10	347 11	348 12	349 12	350 14
351 15	352 16	353 17	354 18	355 19	356 20	357 21
358 22	359 23	360 24	361 25	362 26	363 27	364 28

Leap

Sun	Moon
365 1	366 2

Moon Years (UNIX EPOCH)

CLASSIC MONTHLY FORMAT

Unath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 1	2 2	3 3	4 4	5 5	6 6	7 7
8 8	9 9	10 10	11 11	12 12	13 12	14 14
15 15	16 16	17 17	18 18	19 19	20 20	21 21
22 22	23 23	24 24	25 25	26 26	27 27	28 28

Duath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 29	2 30	3 31	4 32	5 33	6 34	7 35
8 36	9 37	10 38	11 39	12 40	13 41	14 42
15 43	16 44	17 45	18 46	19 47	20 48	21 49
22 50	23 51	24 52	25 53	26 54	27 55	28 56

Triath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 57	2 58	3 59	4 60	5 61	6 62	7 63
8 64	9 65	10 66	11 67	12 68	13 69	14 70
15 71	16 72	17 73	18 74	19 75	20 76	21 77
22 78	23 79	24 80	25 81	26 82	27 83	28 84

Quadtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 85	2 86	3 87	4 88	5 89	6 90	7 91
8 92	9 93	10 94	11 95	12 96	13 97	14 98
15 99	16 100	17 101	18 102	19 103	20 104	21 105
22 106	23 107	24 108	25 109	26 110	27 111	28 112

Pentath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 113	2 114	3 115	4 116	5 117	6 118	7 119
8 120	9 121	10 122	11 123	12 124	13 125	14 126
15 127	16 128	17 129	18 130	19 131	20 132	21 133
22 134	23 135	24 136	25 137	26 138	27 139	28 140

Sixtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 141	2 142	3 143	4 144	5 145	6 146	7 147
8 148	9 149	10 150	11 151	12 152	13 153	14 154
15 155	16 156	17 157	18 158	19 159	20 160	21 161
22 162	23 163	24 164	25 165	26 166	27 167	28 168

Septeth

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 169	2 170	3 171	4 172	5 173	6 174	7 175
8 176	9 177	10 178	11 179	12 180	13 181	14 182
15 183	16 184	17 185	18 186	19 187	20 188	21 189
22 190	23 191	24 192	25 193	26 194	27 195	28 196

Octoth

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 197	2 198	3 199	4 200	5 201	6 202	7 203
8 204	9 205	10 206	11 207	12 208	13 209	14 210
15 211	16 212	17 213	18 214	19 215	20 216	21 217
22 218	23 219	24 220	25 221	26 222	27 223	28 224

Novtath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 225	2 226	3 227	4 228	5 229	6 230	7 231
8 232	9 233	10 234	11 235	12 236	13 237	14 238
15 239	16 240	17 241	18 242	19 243	20 244	21 245
22 246	23 247	24 248	25 249	26 250	27 251	28 252

Dekath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 253	2 254	3 255	4 256	5 257	6 258	7 259
8 260	9 261	10 262	11 263	12 264	13 265	14 266
15 267	16 268	17 269	18 270	19 271	20 272	21 273
22 274	23 275	24 276	25 277	26 278	27 279	28 280

Dekaunath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 281	2 282	3 283	4 284	5 285	6 286	7 287
8 288	9 289	10 290	11 291	12 292	13 293	14 294
15 295	16 296	17 297	18 298	19 299	20 300	21 301
22 302	23 303	24 304	25 305	26 306	27 307	28 308

Dekaduath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 309	2 310	3 311	4 312	5 313	6 314	7 315
8 316	9 317	10 318	11 319	12 320	13 321	14 322
15 323	16 324	17 325	18 326	19 327	20 328	21 329
22 330	23 331	24 332	25 333	26 334	27 335	28 336

Dekatriath

Merc	Ven	Earth	Mars	Jup	Sat	Ura
1 337	2 338	3 339	4 340	5 341	6 342	7 343
8 344	9 345	10 346	11 347	12 348	13 349	14 350
15 351	16 352	17 353	18 354	19 355	20 356	21 357
22 358	23 359	24 360	25 361	26 362	27 363	28 364

Leap

Sun	Moon
1 365	2 366

Moon Years (UNIX EPOCH)

WEEKLY FORMAT								
Week	**Month**	**Mercury**	**Venus**	**Earth**	**Mars**	**Jupiter**	**Saturn**	**Uranus**
1	**Unath**	1	2	3	4	5	6	7
2	**Unath**	8	9	10	11	12	13	14
3	**Unath**	15	16	17	18	19	20	21
4	**Unath**	22	23	24	25	26	27	28
5	**Duath**	29	30	31	32	33	34	35
6	**Duath**	36	37	38	39	40	41	42
7	**Duath**	43	44	45	46	47	48	49
8	**Duath**	50	51	52	53	54	55	56
9	**Triath**	57	58	59	60	61	62	63
10	**Triath**	64	65	66	67	68	69	70
11	**Triath**	71	72	73	74	75	76	77
12	**Triath**	78	79	80	81	82	83	84
13	**Quadtath**	85	86	87	88	89	90	91
14	**Quadtath**	92	93	94	95	96	97	98
15	**Quadtath**	99	100	101	102	103	104	105
16	**Quadtath**	106	107	108	109	110	111	112
17	**Pentath**	113	114	115	116	117	118	119
18	**Pentath**	120	121	122	123	124	125	126
19	**Pentath**	127	128	129	130	131	132	133
20	**Pentath**	134	135	136	137	138	139	140
21	**Sixtith**	141	142	143	144	145	146	147
22	**Sixtith**	148	149	150	151	152	153	154
23	**Sixtith**	155	156	157	158	159	160	161
24	**Sixtith**	162	163	164	165	166	167	168
25	**Septeth**	169	170	171	172	173	174	175
26	**Septeth**	176	177	178	179	180	181	182
27	**Septeth**	183	184	185	186	187	188	189
28	**Septeth**	190	191	192	193	194	195	196
29	**Octoth**	197	198	199	200	201	202	203
30	**Octoth**	204	205	206	207	208	209	210
31	**Octoth**	211	212	213	214	215	216	217
32	**Octoth**	218	219	220	221	222	223	224
33	**Novtath**	225	226	227	228	229	230	231
34	**Novtath**	232	233	234	235	236	237	238
35	**Novtath**	239	240	241	242	243	244	245
36	**Novtath**	246	247	248	249	250	251	252
37	**Dekath**	253	254	255	256	257	258	259
38	**Dekath**	260	261	262	263	264	265	266
39	**Dekath**	267	268	269	270	271	272	273
40	**Dekath**	274	275	276	277	278	279	280
41	**Dekaunath**	281	282	283	284	285	286	287
42	**Dekaunath**	288	289	290	291	292	293	294
43	**Dekaunath**	295	296	297	298	299	300	301
44	**Dekaunath**	302	303	304	305	306	307	308
45	**Dekaduath**	309	310	311	312	313	314	315
46	**Dekaduath**	316	317	318	319	320	321	322
47	**Dekaduath**	323	324	325	326	327	328	329
48	**Dekaduath**	330	331	332	333	334	335	336
49	**Dekatriath**	337	338	339	340	341	342	343
50	**Dekatriath**	344	345	346	347	348	349	350
51	**Dekatriath**	351	352	353	354	355	356	357
52	**Dekatriath**	358	359	360	361	362	363	364
53	**Leap**	365	366					

Note: If you are a software developer, you can make your GET requests directly to the official web site www.solarixcalendar.org, or make your own implementation according to the programming language. Since it's a non-profit organization please consider making a small donation according to your budget, just in order to cover our fixed costs. You can also contribute with code by subscribing and making your push request.

BASIC FUNCTIONS

Functions	Description
get_date()	Gets the Date and Time GMC/UTC in SOLARIX Solar Calendar Flat Ordinal Format **SLX(YYY/DDD) HH:MM:SS::MS |** SLX(50/366) 23:45:59::999
get_year()	Get the **year** in SOLARIX Format | (Gregorian Year - 1969)
get_month()	Get the **month** as a number (1-14) | (14th being the Leap Period, Days 365, 366)
get_day()	Get the **flat day** out of 366 days | (Same as Gregorian Straight Day)
get_day_of_month()	Get the **day** relative to the month as a number (1-28)
get_day_of_week()	Get the **weekday** as a number (1-7)
get_hours()	Get the **hour** (0-23) | *Equal to Gregorian Calendar*
get_minutes()	Get the **minute** (0-59) | *Equal to Gregorian Calendar*
get_seconds()	Get the **second** (0-59) | *Equal to Gregorian Calendar*
get_milliseconds()	Get the **millisecond** (0-999) | *Equal to Gregorian Calendar*
get_time()	Get the time in **milliseconds** since SLX(1/1) | *Equal to Gregorian Calendar*

DATE OBJECT METHODS

Method	Description
.get_year()	Returns the year in SOLARIX (YYY) (Gregorian -1969)
.get_month()	Returns the month out of 14 periods
.get_day()	Returns the flat day out of 366 days
.get_day_of_month()	Returns the day of the month (from 1-28)
.get_day_of_week()	Returns the day of the week (from 1-7)
.get_hours()	Returns the hour (from 0-23)
.get_milliseconds()	Returns the milliseconds (from 0-999)
.get_minutes()	Returns the minutes (from 0-59)
.get_month()	Returns the month (from 0-11)
.get_seconds()	Returns the seconds (from 0-59)
.get_time()	Returns the number of milliseconds since midnight SLX(1/1)
.get_timezone_offset_()	Returns the time difference between SOLARIX time and local time in minutes
.get_SLX_date()	Returns the day of the month, according to universal time (from 1-28)
.get_SLX_day()	Returns the day of the week, according to universal time (from 1-7)
.get_SLX_full_year()	Returns the year, according to universal time
.get_SLX_hours()	Returns the hour, according to universal time (from 0-23)
.get_SLX_milliseconds()	Returns the milliseconds, according to universal time (from 0-999)
.get_SLX_minutes()	Returns the minutes, according to universal time (from 0-59)
.get_SLX_month()	Returns the month, according to universal time (from 0-11)
.get_SLX_seconds()	Returns the seconds, according to universal time (from 0-59)
.now()	Returns the number of milliseconds since midnight SLX(1/1)
.parse()	Parses a date string and returns the number of milliseconds since SLX(1/1)
.set_date()	Sets the day of the month of a Date Object
.set_year()	Sets the year of a Date Object

.set_hours()	Sets the hour of a Date Object
.set_milliseconds()	Sets the milliseconds of a Date Object
.set_minutes()	Sets the minutes of a Date Object
.set_month()	Sets the month of a Date Object
.set_seconds()	Sets the seconds of a Date Object
.set_time()	Sets a date to a specified number of milliseconds after/before SLX(1/1)
.set_SLX_date()	Sets the day of the month of a Date Object, according to universal time
.set_SLX_year()	Sets the year of a Date Object, according to universal time
.set_SLX_hours()	Sets the hour of a Date Object, according to universal time
.set_SLX_milliseconds()	Sets the milliseconds of a Date Object, according to universal time
.set_SLX_minutes()	Sets the minutes of a Date Object, according to universal time
.set_SLX_month()	Sets the month of a Date Object, according to universal time
.set_SLX_seconds()	Sets the seconds of a Date Object, according to universal time
.to_date_string()	Converts the date portion of a Date Object into a readable string
.to_ISO_string()	Returns the date as a string, using the ISO SOLARIX Standard
.to_JSON()	Returns the date as a string, formatted as a JSON date
.to_locale_date_string()	Returns the date portion of a Date Object as a string, using locale conventions
.to_locale_time_string()	Returns the time portion of a Date Object as a string, using locale conventions
.to_locale_string()	Converts a Date Object to a string, using locale conventions
.to_string()	Converts a Date Object to a string
.to_time_string()	Converts the time portion of a Date Object to a string
.to_SLX_string()	Converts a Date Object to a string, according to universal time
.SLX()	Returns number of milliseconds in a date since midnight SLX(1/1)
.value_of_SLX()	Returns the primitive value of a Date Object