

The ooRexx decimalFormat Class

Date: Nov. 2007
Author: Lee Peedin
Purpose: To provide a simple means to format a decimal number.
Requires: decimalFormat.cls
Version: Beta .1

Methods

new	formatter = .decimalFormat~new(optional pattern) If pattern is not specified, the default pattern “#,###.##’ will be used.
format	a_result = formatter~format(number) Returns a result with “number” formatted according to the set pattern.

Attributes

groupingSize	get a_result = formatter~groupingSize (Default is 3) set formatter~groupingSize = numeric whole number
decimalSeparator	get a_result = formatter~decimalSeparator (Default is ‘.’) set formatter~decimalSeparator = single length character that is not a duplicate of the groupingSeparator.
groupingSeparator	get a_result = formatter~groupingSeparator (Default is ‘,’) set formatter~groupingSeparator = single length character that is not a duplicate of the decimalSeparator.
pattern	get a_result = formatter~pattern (Default is ‘#,###.##’) set formatter~pattern = a valid pattern as described below

Patterns

A pattern can be from 1 to 3 sub-patterns with the sub-patterns separated by a semi-colon ‘;’.

The first sub-pattern will be applied to positive values.

The second sub-pattern will be applied to negative values.

The third sub-pattern will be applied to a 0 value.

If only one sub-pattern is specified, the same pattern will be applied to positive, negative, and 0 values. A negative value will be preceded with the default minus sign ‘-’. A 0 value is treated as a positive value.

The positive and negative sub-patterns can have from 1 to 3 parts:

Part 1 – A string prefix enclosed in quotes

Part 2 – A pattern “mask”

Part 3 – A string suffix enclosed in quotes

Note: A negative sub-pattern does not have to repeat the mask, if the same mask is to be used – only the prefix & suffix need be supplied.

The zero sub-pattern has 1 part:

Part 1 – A string value enclosed in quotes (.nil can also be used, but it must NOT be quoted)

Pattern Masks

Each pattern mask has 4 reserved symbols

- # A pound/hash symbol represents an “expendable” place holder. If the formatted result has a corresponding value, the # will be replaced with the corresponding value.
 - 0 A zero represents a “non-expendable” place holder. If the formatted result has a corresponding value the 0 will be replaced with the corresponding value. If there is not a corresponding value, the 0 will remain as the place holder.
 - ,
 - .
- A comma signifies that each “thousands” group is to be separated with a comma.
- A period signifies the integer and decimal separator. Results are rounded, according to ooRexx format rules, based on the number of place holders in the decimal portion of the number argument.

Note: If a filler string is required, it should be part of either the prefix or suffix.

Pattern Examples and Corresponding Results

decimalFormat Version...: Beta .1

Pattern Is ->('#,###.##')	Grouping Size	Is -> 3 <-
UnFormatted	Formatted	Test #
10193390	10,193,390	1
10193390.00	10,193,390	2
10193390.49	10,193,390.49	3
10193390.51	10,193,390.51	4
10193390.513	10,193,390.51	5
10193390.515	10,193,390.52	6
0	0	7
.1	.1	8
.11	.11	9
.15	.15	10
.114	.11	11
.115	.12	12
110193390	110,193,390	13
-10193390	-10,193,390	14
-10193390.00	-10,193,390	15
-10193390.49	-10,193,390.49	16
-10193390.51	-10,193,390.51	17
-10193390.513	-10,193,390.51	18
-10193390.515	-10,193,390.52	19
0	0	20
-0.1	-.1	21
-0.11	-.11	22
-0.15	-.15	23
-0.114	-.11	24
-0.115	-.12	25

Pattern Is ->('#') <-> Grouping Size		Is -> 3 <-
UnFormatted	Formatted	Test #
10193390	10193390	26
10193390.00	10193390	27
10193390.49	10193390	28
10193390.51	10193391	29
10193390.513	10193391	30
10193390.515	10193391	31
0	0	32
.1	0	33
.11	0	34
.15	0	35
.114	0	36
.115	0	37
110193390	110193390	38
-10193390	-10193390	39
-10193390.00	-10193390	40
-10193390.49	-10193390	41
-10193390.51	-10193391	42
-10193390.513	-10193391	43
-10193390.515	-10193391	44
0	0	45
-0.1	0	46
-0.11	0	47
-0.15	0	48
-0.114	0	49
-0.115	0	50

Pattern Is ->('#.##') <-> Grouping Size Is -> 3 <-
UnFormatted Formatted Test #

UnFormatted	Formatted	Test #
10193390	10193390	51
10193390.00	10193390	52
10193390.49	10193390.49	53
10193390.51	10193390.51	54
10193390.513	10193390.51	55
10193390.515	10193390.52	56
0	0	57
.1	.1	58
.11	.11	59
.15	.15	60
.114	.11	61
.115	.12	62
110193390	110193390	63
-10193390	-10193390	64
-10193390.00	-10193390	65
-10193390.49	-10193390.49	66
-10193390.51	-10193390.51	67
-10193390.513	-10193390.51	68
-10193390.515	-10193390.52	69
0	0	70
-0.1	-.1	71
-0.11	-.11	72
-0.15	-.15	73
-0.114	-.11	74
-0.115	-.12	75

Pattern Is ->('#.00') <-> Grouping Size Is -> 3 <-
UnFormatted Formatted Test #

UnFormatted	Formatted	Test #
10193390	10193390.00	76
10193390.00	10193390.00	77
10193390.49	10193390.49	78
10193390.51	10193390.51	79
10193390.513	10193390.51	80
10193390.515	10193390.52	81
0	0	82
.1	.10	83
.11	.11	84
.15	.15	85
.114	.11	86
.115	.12	87
110193390	110193390.00	88
-10193390	-10193390.00	89
-10193390.00	-10193390.00	90
-10193390.49	-10193390.49	91
-10193390.51	-10193390.51	92
-10193390.513	-10193390.51	93
-10193390.515	-10193390.52	94
0	0	95
-0.1	-.10	96
-0.11	-.11	97
-0.15	-.15	98
-0.114	-.11	99
-0.115	-.12	100

Pattern Is ->('0.00') <-> Grouping Size Is -> 3 <-
UnFormatted Formatted Test #

-----	-----	-----
10193390	10193390.00	101
10193390.00	10193390.00	102
10193390.49	10193390.49	103
10193390.51	10193390.51	104
10193390.513	10193390.51	105
10193390.515	10193390.52	106
0	0	107
.1	0.10	108
.11	0.11	109
.15	0.15	110
.114	0.11	111
.115	0.12	112
110193390	110193390.00	113
-10193390	-10193390.00	114
-10193390.00	-10193390.00	115
-10193390.49	-10193390.49	116
-10193390.51	-10193390.51	117
-10193390.513	-10193390.51	118
-10193390.515	-10193390.52	119
0	0	120
-0.1	-0.10	121
-0.11	-0.11	122
-0.15	-0.15	123
-0.114	-0.11	124
-0.115	-0.12	125

Pattern Is ->('#,##.00') <-> Grouping Size Is -> 3 <-
UnFormatted Formatted Test #

-----	-----	-----
10193390	10,193,390.00	126
10193390.00	10,193,390.00	127
10193390.49	10,193,390.49	128
10193390.51	10,193,390.51	129
10193390.513	10,193,390.51	130
10193390.515	10,193,390.52	131
0	0	132
.1	.10	133
.11	.11	134
.15	.15	135
.114	.11	136
.115	.12	137
110193390	110,193,390.00	138
-10193390	-10,193,390.00	139
-10193390.00	-10,193,390.00	140
-10193390.49	-10,193,390.49	141
-10193390.51	-10,193,390.51	142
-10193390.513	-10,193,390.51	143
-10193390.515	-10,193,390.52	144
0	0	145
-0.1	-.10	146
-0.11	-.11	147
-0.15	-.15	148
-0.114	-.11	149
-0.115	-.12	150

Pattern Is ->(' \$"#,##0.00') <->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	\$10,193,390.00	151	
10193390.00	\$10,193,390.00	152	
10193390.49	\$10,193,390.49	153	
10193390.51	\$10,193,390.51	154	
10193390.513	\$10,193,390.51	155	
10193390.515	\$10,193,390.52	156	
0	\$0	157	
.1	\$0.10	158	
.11	\$0.11	159	
.15	\$0.15	160	
.114	\$0.11	161	
.115	\$0.12	162	
110193390	\$110,193,390.00	163	
-10193390	-\$10,193,390.00	164	
-10193390.00	-\$10,193,390.00	165	
-10193390.49	-\$10,193,390.49	166	
-10193390.51	-\$10,193,390.51	167	
-10193390.513	-\$10,193,390.51	168	
-10193390.515	-\$10,193,390.52	169	
0	\$0	170	
-0.1	-\$0.10	171	
-0.11	-\$0.11	172	
-0.15	-\$0.15	173	
-0.114	-\$0.11	174	
-0.115	-\$0.12	175	

Pattern Is ->(' \$"#,##0.00; "- \$"#,##0.00') <->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	\$10,193,390.00	176	
10193390.00	\$10,193,390.00	177	
10193390.49	\$10,193,390.49	178	
10193390.51	\$10,193,390.51	179	
10193390.513	\$10,193,390.51	180	
10193390.515	\$10,193,390.52	181	
0	\$0	182	
.1	\$0.10	183	
.11	\$0.11	184	
.15	\$0.15	185	
.114	\$0.11	186	
.115	\$0.12	187	
110193390	\$110,193,390.00	188	
-10193390	-\$10,193,390.00	189	
-10193390.00	-\$10,193,390.00	190	
-10193390.49	-\$10,193,390.49	191	
-10193390.51	-\$10,193,390.51	192	
-10193390.513	-\$10,193,390.51	193	
-10193390.515	-\$10,193,390.52	194	
0	\$0	195	
-0.1	-\$0.10	196	
-0.11	-\$0.11	197	
-0.15	-\$0.15	198	
-0.114	-\$0.11	199	
-0.115	-\$0.12	200	

Pattern Is ->('"\$#",##0.00;"-\$#",###.##') <->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	\$10,193,390.00	201
10193390.00	\$10,193,390.00	202
10193390.49	\$10,193,390.49	203
10193390.51	\$10,193,390.51	204
10193390.513	\$10,193,390.51	205
10193390.515	\$10,193,390.52	206
0	\$0	207
.1	\$0.10	208
.11	\$0.11	209
.15	\$0.15	210
.114	\$0.11	211
.115	\$0.12	212
110193390	\$110,193,390.00	213
-10193390	-\$10,193,390	214
-10193390.00	-\$10,193,390	215
-10193390.49	-\$10,193,390.49	216
-10193390.51	-\$10,193,390.51	217
-10193390.513	-\$10,193,390.51	218
-10193390.515	-\$10,193,390.52	219
0	\$0	220
-0.1	-\$0.1	221
-0.11	-\$0.11	222
-0.15	-\$0.15	223
-0.114	-\$0.11	224
-0.115	-\$0.12	225

Pattern Is ->('"\$#",##0.00" DB";"-\$"" CR") <->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	\$10,193,390.00 DB	226
10193390.00	\$10,193,390.00 DB	227
10193390.49	\$10,193,390.49 DB	228
10193390.51	\$10,193,390.51 DB	229
10193390.513	\$10,193,390.51 DB	230
10193390.515	\$10,193,390.52 DB	231
0	\$0 DB	232
.1	\$0.10 DB	233
.11	\$0.11 DB	234
.15	\$0.15 DB	235
.114	\$0.11 DB	236
.115	\$0.12 DB	237
110193390	\$110,193,390.00 DB	238
-10193390	-\$10,193,390.00 CR	239
-10193390.00	-\$10,193,390.00 CR	240
-10193390.49	-\$10,193,390.49 CR	241
-10193390.51	-\$10,193,390.51 CR	242
-10193390.513	-\$10,193,390.51 CR	243
-10193390.515	-\$10,193,390.52 CR	244
0	\$0 DB	245
-0.1	-\$0.10 CR	246
-0.11	-\$0.11 CR	247
-0.15	-\$0.15 CR	248
-0.114	-\$0.11 CR	249
-0.115	-\$0.12 CR	250

Pattern Is ->('#,##0.00;"()"');'.nil)<->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	10,193,390.00	251	
10193390.00	10,193,390.00	252	
10193390.49	10,193,390.49	253	
10193390.51	10,193,390.51	254	
10193390.513	10,193,390.51	255	
10193390.515	10,193,390.52	256	
0	The NIL object	257	
.1	0.10	258	
.11	0.11	259	
.15	0.15	260	
.114	0.11	261	
.115	0.12	262	
110193390	110,193,390.00	263	
-10193390	(10,193,390.00)	264	
-10193390.00	(10,193,390.00)	265	
-10193390.49	(10,193,390.49)	266	
-10193390.51	(10,193,390.51)	267	
-10193390.513	(10,193,390.51)	268	
-10193390.515	(10,193,390.52)	269	
0	The NIL object	270	
-0.1	(0.10)	271	
-0.11	(0.11)	272	
-0.15	(0.15)	273	
-0.114	(0.11)	274	
-0.115	(0.12)	275	

Pattern Is ->('#,##0.00;"()"';"[0]"')<->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	10,193,390.00	276	
10193390.00	10,193,390.00	277	
10193390.49	10,193,390.49	278	
10193390.51	10,193,390.51	279	
10193390.513	10,193,390.51	280	
10193390.515	10,193,390.52	281	
0	[0]	282	
.1	0.10	283	
.11	0.11	284	
.15	0.15	285	
.114	0.11	286	
.115	0.12	287	
110193390	110,193,390.00	288	
-10193390	(10,193,390.00)	289	
-10193390.00	(10,193,390.00)	290	
-10193390.49	(10,193,390.49)	291	
-10193390.51	(10,193,390.51)	292	
-10193390.513	(10,193,390.51)	293	
-10193390.515	(10,193,390.52)	294	
0	[0]	295	
-0.1	(0.10)	296	
-0.11	(0.11)	297	
-0.15	(0.15)	298	
-0.114	(0.11)	299	
-0.115	(0.12)	300	

Pattern Is ->('0.000') <->Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	10193390.000	301	
10193390.00	10193390.000	302	
10193390.49	10193390.490	303	
10193390.51	10193390.510	304	
10193390.513	10193390.513	305	
10193390.515	10193390.515	306	
0	0	307	
.1	0.100	308	
.11	0.110	309	
.15	0.150	310	
.114	0.114	311	
.115	0.115	312	
110193390	110193390.000	313	
-10193390	-10193390.000	314	
-10193390.00	-10193390.000	315	
-10193390.49	-10193390.490	316	
-10193390.51	-10193390.510	317	
-10193390.513	-10193390.513	318	
-10193390.515	-10193390.515	319	
0	0	320	
-0.1	-0.100	321	
-0.11	-0.110	322	
-0.15	-0.150	323	
-0.114	-0.114	324	
-0.115	-0.115	325	

Pattern Is ->('#,###.##') <->Grouping Size Is -> 4 <-
 UnFormatted Formatted Test #

10193390	1019,3390	326	
10193390.00	1019,3390	327	
10193390.49	1019,3390.49	328	
10193390.51	1019,3390.51	329	
10193390.513	1019,3390.51	330	
10193390.515	1019,3390.52	331	
0	0	332	
.1	.1	333	
.11	.11	334	
.15	.15	335	
.114	.11	336	
.115	.12	337	
110193390	1,1019,3390	338	
-10193390	-1019,3390	339	
-10193390.00	-1019,3390	340	
-10193390.49	-1019,3390.49	341	
-10193390.51	-1019,3390.51	342	
-10193390.513	-1019,3390.51	343	
-10193390.515	-1019,3390.52	344	
0	0	345	
-0.1	-.1	346	
-0.11	-.11	347	
-0.15	-.15	348	
-0.114	-.11	349	
-0.115	-.12	350	

Pattern Is ->('#,##0.00') <-> Grouping Size Is -> 4 <-
 UnFormatted Formatted Test #

10193390	1019,3390.00	351
10193390.00	1019,3390.00	352
10193390.49	1019,3390.49	353
10193390.51	1019,3390.51	354
10193390.513	1019,3390.51	355
10193390.515	1019,3390.52	356
0	0	357
.1	0.10	358
.11	0.11	359
.15	0.15	360
.114	0.11	361
.115	0.12	362
110193390	1,1019,3390.00	363
-10193390	-1019,3390.00	364
-10193390.00	-1019,3390.00	365
-10193390.49	-1019,3390.49	366
-10193390.51	-1019,3390.51	367
-10193390.513	-1019,3390.51	368
-10193390.515	-1019,3390.52	369
0	0	370
-0.1	-0.10	371
-0.11	-0.11	372
-0.15	-0.15	373
-0.114	-0.11	374
-0.115	-0.12	375

Pattern Is ->('€'#,##0.00;"-€'#,##0.00;"[0]"') <-> Grouping Size Is -> 3 <-
 UnFormatted Formatted Test #

10193390	€10.193.390,00	376
10193390.00	€10.193.390,00	377
10193390.49	€10.193.390,49	378
10193390.51	€10.193.390,51	379
10193390.513	€10.193.390,51	380
10193390.515	€10.193.390,52	381
0	[0]	382
.1	€0,10	383
.11	€0,11	384
.15	€0,15	385
.114	€0,11	386
.115	€0,12	387
110193390	€110.193.390,00	388
-10193390	-€10.193.390,00	389
-10193390.00	-€10.193.390,00	390
-10193390.49	-€10.193.390,49	391
-10193390.51	-€10.193.390,51	392
-10193390.513	-€10.193.390,51	393
-10193390.515	-€10.193.390,52	394
0	[0]	395
-0.1	-€0,10	396
-0.11	-€0,11	397
-0.15	-€0,15	398
-0.114	-€0,11	399
-0.115	-€0,12	400