

# ArcBITS Newsletter

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## ArcSys Hot Tip

This is the beginning of our 18th year in business and publishing a newsletter. Imagine, 204 publications! Not too bad for a small software business. Send us an email of what you recall as the "best" newsletter article published in ArcBITS. Send to [marchule@earthlink.net](mailto:marchule@earthlink.net)

## A Primer in Sorting

Even though the concept of sorting should be simple and straight forward, it is often easy for people to get a little puzzled. As we all know, the English alphabet is made of 26 letters, A-Z. The computers we work with use a coding system known as ASCII and it contains an alphabet of 256 symbols. Included in this set of symbols are the letters A-Z, a-z, numbers 0-9 and a number of other special characters like # \$ % & \* ( ) to name but a few. If we put the first 128 symbols in order of their definition, they become:

000	{nul}	016	▶ (dle)	032	sp	048	0	064	Ø	080	P	096	`	112	p
001	Ⓞ (soh)	017	◀ (dc1)	033	!	049	1	065	À	081	Q	097	a	113	q
002	Ⓢ (stx)	018	↑ (dc2)	034	"	050	2	066	B	082	R	098	b	114	r
003	▼ (etx)	019	!! (dc3)	035	#	051	3	067	C	083	S	099	c	115	s
004	⊕ (eot)	020	¶ (dc4)	036	\$	052	4	068	D	084	T	100	d	116	t
005	Ⓜ (enq)	021	Ⓢ (nak)	037	%	053	5	069	E	085	U	101	e	117	u
006	▲ (ack)	022	- (syn)	038	&	054	6	070	F	086	V	102	f	118	v
007	▪ (bel)	023	↓ (etb)	039	'	055	7	071	G	087	W	103	g	119	w
008	▣ (bs)	024	↑ (can)	040	(	056	8	072	H	088	X	104	h	120	x
009	{tab}	025	↓ (em)	041	)	057	9	073	I	089	Y	105	i	121	y
010	{lf}	026	{eof}	042	*	058	:	074	J	090	Z	106	j	122	z
011	Ⓜ (vt)	027	← (esc)	043	+	059	;	075	K	091	[	107	k	123	{
012	Ⓜ (np)	028	L (fs)	044	,	060	<	076	L	092	\	108	l	124	
013	{cr}	029	↔ (gs)	045	-	061	=	077	M	093	]	109	m	125	}
014	Ⓜ (so)	030	▲ (rs)	046	.	062	>	078	N	094	^	110	n	126	~
015	Ⓜ (si)	031	▼ (us)	047	/	063	?	079	O	095	_	111	o	127	o

This is important to know because you can see that the numbers come before the letters. Upper case letters come before lower case letters. This order is what controls how the computer "thinks" when it is told to sort a column of data. The following list is sorted correctly (as far as the computer is concerned) because it is just looking at the rank of each character. As people we tend to see the following list as words with context.

### ADAM BAKER ad bake

What makes computers so helpful is how fast they can sort and organize data. Computers don't sort "words" but character by character comparisons. If you were given a deck of cards and told to place in suit and then rank order, how many times would you have touched each card? If the deck were already sorted, you would touch each card a minimum of 52 times. But if the deck is truly random, you can see that each card could be handled many times. (You should try this sometime.) A clever mechanism for sorting a large number of data is to perform what is known as "divide and conquer". If you broke your deck of cards into 4 smaller piles, you will find it easier to sort each small pile. Then when each sub-pile is organized, you merge the 4 piles together. In the long run, you end up handling all the cards fewer times. These mechanisms for sorting are an example of a computer algorithm. Computer science comes into play in knowing what the optimum methods are for sorting. Ready for a test? See how long it takes you to sort the following:

Uncle AUNT AUN,T AUNTIE UNClE, (aunt Zulu zULu )zulu 0123 0123 o123





## An Index of Past Articles

DATE....	TITLE.....	CONTENT.....
11/01/15	Zip-a-dee-do-dah	how you can copy and paste from USPS web site correct zip codes
11/01/15	Hot Tip - Which Browser	how a Super user can assign a browser to a Red Planet user
11/01/15	Most Physicians Cant Get No EHR Satisfaction	article describing dissatisfaction on using EHR systems
12/01/15	I Need an EOB	if you use electronic remits, then this shows how you can pull up the eob for a service
12/01/15	Hot Tip - Wild Card	describes how you can look up things using wild card searches
12/01/15	Button, Button, Who's Got the Button?	how you can run a report showing which function key buttons are used
01/01/16	Once There Was Gotham	history article on an early MegaWest client, Pacific Physician Services and their massive computer system
01/01/16	Hot Tip - Insurance Edit Check	how to implement the robust edit checker for insurance edits in patient registration
01/01/16	New Red Planet Feature Makes Users Look Years Younger	describes how each user can choose how much of their screen monitor they want Red Planet to use
02/01/16	The 1990 MegaWest User Conference	pictures of MegaWest employees 26 years ago
02/01/16	Hot Tip - Function Key Trick	how to use function keys from the screen
02/01/16	A Walk Back in Time	a page from the August 1995 MegaWest newsletter
03/01/16	All Within Seconds	interesting story how people making changes within seconds of each other impacted other processes
03/01/16	Hot Tip - Connection messages	review of the Mvbase connection messages and what they may mean
03/01/16	Meaningful Use Report (Part 1)	overview of the MU report
04/01/16	New Template Feature	describes how the medical visit template can have a dynamic pop-up window
04/01/16	Hot Tip - Password Reset	describes how a Super user can reset the password for a user
04/01/16	Meaningful Use Report (Part 2)	describes MU measure 5
05/01/16	Move Payment Is Enhanced	describes new features available for the MovePymt button
05/01/16	Hot Tip - Custom logos	how to include a company logo as part of the Adobe output
05/01/16	Meaningful Use Report (Part 3)	covers MU measures 6-12
06/01/16	Eh, (chomp, chomp, chomp) what's up Doc?	introduction to Updodx
06/01/16	Hot Tip - Task Manager	how to get to the Windows Task Manager
06/01/16	Meaningful Use (part 4)	covers MU measures 13-22
07/01/16	Online Registration with Red Planet	description of how an Updodx form for collecting patient registration can be used
07/01/16	Phone Tricks	Hot Tip - you can include more information than just the phone
07/01/16	Geek Story	unraveling the mystery of a billboard with R0VUIC9odGc
08/01/16	Did You Know?	commentary on how the file relations are defined in the Red Planet world
08/01/16	News from the Field	Hot Tip - Wintegrate works under Windows 10. Users report Updodx is amazing.
08/01/16	Now That You Know (Part 1)	description of how Red Planet can allow each user to customize the sort options for their list displays
09/01/16	In 45 Minutes	overview of how long it takes to get Updodx installed and operational for appointment reminders
09/01/16	On-line Forms	Hot Tip - link to a client site to see what can be done with on-line forms
09/01/16	Now That You Know (part 2)	description of how Filters can be defined to narrow the amount of data being displayed
10/01/16	Man on the Street	commentary about inter-computer communications and what happens when an unforeseen event occurs
10/01/16	ICD-10	Hot Tip - updates on ICD-10 codes
10/01/16	Dismal Report on EHR	report on a survey how doctors signed up for EHRs, but are failing at meeting meaningful use
11/01/16	The MIPS Monster Cometh	relates how Red Planet and the Medicare Quality Payment Program will work together
11/01/16	Automatic Updates	Hot Tip - this is a Red Planet feature to have reminders and checkups sent automatically to Updodx
11/01/16	Only a 1% Hit	how to run a report showing what the Medicare income is in anticipation of a 1% reduction
12/01/16	Innovative Ideas with Updodx	Use Updodx for appointment reminders, promotions, lab results, statements
12/01/16	Mars	Hot Tip - promoting National Geographic cable show
12/01/16	Setting Up An E-mail Reminder	tech notes on how to set up Updodx email reminders