

User Friendly

LACS
**A Computer and
Technology
User Group**

NOTE: Please refer to page 2 of this issue for an update on the new dues-paying system and for the amount due in 2023.

LACS LUNCH

LACS is planning a lunch get-together at the **Culver City Sizzler** at 5801 Sepulveda Blvd. on **June 21 at 11:30 AM**. Please come to socialize and to discuss computer and technology-related matters.

Please RSVP to Stephanie at **nordlacs@aol.com** or phone her by the **eve of Monday, June 19. Watch your email for updates.** It will be wonderful to get together again!

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JUNE 13, 2023 GENERAL MEETING

MeetingTime: 7:00 to 9:00 PM — via Zoom

Socializing and Questions & Answers: 6:30

Topic: Artificial Intelligence – New Kid on the Block

Speakers: Judy Taylour, APCUG Speakers Bureau President and webmaster, SCV Computer Club

Stephanie Nordlinger, LACS VP

Judy Taylour will give us an overview of Artificial Intelligence with ChatGPT, including the history of AI, what it is, what you can do with it, and ChatGPT schemes to look out for. After Q&A, Stephanie will show us four short ChatGPT videos.

Meet Our Presenter

Judy is a 35-year member of the Santa Clarita Valley Computer Club. She co-facilitated the Southern California Regional User Group Summit (SCRUGS), a group of computer clubs in Southern California that met for over 20 years to share ideas and presenter information, solve problems, etc. Information shared at the meetings helped two groups to remain active. She spent 23 years volunteering with the Southwest Technology Conference held in San Diego for 20 years and in Pomona for three years as chair or co-chair. She was responsible for registration, scheduling speakers, and working with volunteers.



Judy taught adult education technology classes for over 20 years through her local high school district. She firmly believes in life-long learning and enjoys giving presentations via APCUG's Speakers Bureau.

She is a member of the Los Angeles FBI Senior Scams Working Group. Judy also is a Pierce College Computer Applications and Technologies Department Advisory Committee member. It meets annually to suggest courses and hardware for the next school year.

Tuesday, June 13, 7:00—9:00 PM Via Zoom

6:30—7:00: Socializing and informal Q & A

LACS members on the PC groups.IO list will receive the Zoom link before or on **June 11**. Guests may ask for the link by emailing Leah Clark at LeahClark424 (at) gmail.com. before or on **June 11**.

More information about LACS is at www.lacspc.org.



FROM YOUR PRESIDENT / EDITOR HAPPY FATHER'S DAY TO ALL LACS FATHERS



PHOTO SHARING

Recently, I read about a way to share photos from travels or special events. Because many are worried about social media security and privacy, I wonder if this could be a good alternative. So, here is a way to set up a shared photo folder where anyone can post images and make comments.

Cloud services let you create shareable photo albums. You can choose from Dropbox, Google Drive, iCloud, Microsoft One Drive, and probably others.

Upload or copy an initial set of photos or videos into a new folder. Some services allow you to organize your photos into nice presentations or albums. Others may only allow a stack of photos.

Look for the sharing option on the folder page. Add the recipients' email addresses. You may be able to add a note. Hit *Send*. The email will include a secure link to the folder; recipients may open and save it.

Or you can copy the link and paste it into an email to your recipients. This is one way to send any file that's too large to send as an email attachment. I use this method to send the link to the recordings of LACS meetings with Dropbox. That makes it easy to send the link to a group of recipients. ❖

WELCOME TO LACS NEW AND RENEWING MEMBERS

Gavin Faught, LACS Treasurer

New Members (0)

Renewals (2)

Annette Tossounian

Patrick Zilliacus,

Contributor



LACS IS A MEMBER OF APCUG



An International
Association of Technology
and Computer User Groups

www.apcug2.org

www.facebook.com/APCUG

www.twitter.com/apcug

APCUG EVENTS

Watch your email for APCUG workshops and other upcoming events.

**TO VISIT OTHER APCUG GROUPS OR
TO READ THEIR NEWSLETTERS, SEE
THE INSTRUCTIONS ON PAGE 9.**

PAYING YOUR DUES IN 2023

LACS is starting a system where all members will pay their annual dues at the same time, in December or January, for the coming year. Use the following chart to see the prorated amount you will owe in 2023. Select the month you are due, and select the membership level you wish to pay for to see your amount.

MEMBERSHIP LEVELS	SELECT THE MONTH YOU ARE RENEWING OR ARE JOINING LACS													
	Yearly Rate	Monthly Rate	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
New/Renewal with Newsletter	\$40	\$3.33	\$ 3.33	\$ 6.67	\$ 10.00	\$ 13.33	\$ 16.67	\$ 20.00	\$ 23.33	\$ 26.67	\$ 30.00	\$ 33.33	\$ 36.67	\$ 40.00
Associate	\$12	\$1	\$ 1.00	\$ 2.00	\$ 3.00	\$ 4.00	\$ 5.00	\$ 6.00	\$ 7.00	\$ 8.00	\$ 9.00	\$ 10.00	\$ 11.00	\$ 12.00
Student	\$18	\$1.50	\$ 1.50	\$ 3.00	\$ 4.50	\$ 6.00	\$ 7.50	\$ 9.00	\$ 10.50	\$ 12.00	\$ 13.50	\$ 15.00	\$ 16.50	\$ 18.00
New/Renewal with Electronic Newsletter	\$30	\$2.50	\$ 2.50	\$ 5.00	\$ 7.50	\$ 10.00	\$ 12.50	\$ 15.00	\$ 17.50	\$ 20.00	\$ 22.50	\$ 25.00	\$ 27.50	\$ 30.00
Gift membership	\$20	\$1.67	\$ 1.67	\$ 3.33	\$ 5.00	\$ 6.67	\$ 8.33	\$ 10.00	\$ 11.67	\$ 13.33	\$ 15.00	\$ 16.67	\$ 18.33	\$ 20.00
Contributor	\$50	\$4.17	\$ 4.17	\$ 8.33	\$ 12.50	\$ 16.67	\$ 20.83	\$ 25.00	\$ 29.17	\$ 33.33	\$ 37.50	\$ 41.67	\$ 45.83	\$ 50.00
Supporter	\$75	\$6.25	\$ 6.25	\$ 12.50	\$ 18.75	\$ 25.00	\$ 31.25	\$ 37.50	\$ 43.75	\$ 50.00	\$ 56.25	\$ 62.50	\$ 68.75	\$ 75.00
Benefactor	\$100	\$8.33	\$ 8.33	\$ 16.67	\$ 25.00	\$ 33.33	\$ 41.67	\$ 50.00	\$ 58.33	\$ 66.67	\$ 75.00	\$ 83.33	\$ 91.67	\$ 100.00

GENERAL MEETING REPORT

May 9, 2023

By **Leah Clark**, LACS President/Editor

Topic: Computers To the Moon

Speaker: Mark Schulman
Central Florida Computer
Society, APCUG Speaker



Mark's two big interests in life are space and computers. This presentation includes a lot of interesting history and awesome accomplishments. The first manned space flights by Russia and the U.S. were both in 1961. President Kennedy committed the U.S. to going to the moon before the end of the decade.

Mercury was followed by 10 Gemini flights a few years later. We needed to learn how to work outside the spacecraft, to rendezvous and dock, and to maneuver in space. These things are highly mathematical and non-intuitive. There is a reason they call it rocket science! It would be impossible to do without a computer.

The Gemini program was followed by Apollo from 1967 to 1972. It used two different spacecraft — the **Apollo Command and Service Module** to get the people and equipment into lunar orbit, and the **Lunar Module** to land on the moon.

Navigating in Space

To send a rocket from Earth's orbit to the moon, we had to fire the engines in the rocket when the rocket was on the opposite side of the moon. We had to add exactly the right amount of speed so that in three days that rocket would arrive at a point 60 miles ahead of where the moon was three days later. It would have been impossible for a person to work all of this out. Back then, no one had a clue how to make a computer do all this.

Computer Requirements for Apollo

- Execute trajectories to get from Earth to the Moon

- Continuously update position and attitude, i.e. which way the spacecraft is pointing.
- Perform calculations and display data in real time (These were the days when you took a bunch of cards, fed them into a computer, and came back a couple of hours later for your results.)
- Control the spacecraft's engines and thrusters.
- Receive remote updates from the ground.

Computers had never done any of this before. At that time, a computer filled up an entire room. And we needed to get one of these into a spacecraft!

Personal Computers in 1960

In 1960 a "personal computer" was a slide rule! Charles Draper of the MIT Instrumentation Lab believed his team could build a digital computer for a moon mission. NASA got the project. It was just becoming possible to create a "digital" computer. He saved weight and power by using integrated circuits, which had just been invented in the late 50s. Work began on the Apollo computer in 1961. They came up with the **Apollo Guidance Computer (AGC)**. It was developed by the MIT Instrumentation Lab and manufactured by Raytheon.

AGC Hardware

- 15 - bit word
- 36k words of read-only memory (ROM)
- 2k words of read/write memory (RAM)
- Weight: 70 pounds

Two Spacecraft, Two Computers

There was the Command and Service Module which was responsible for getting the three people into lunar orbit, and the Lunar Module in which two of the three got in. The two computers each had exactly identical hardware but different software because

they had different jobs. Mark described the details of and showed pictures of the modules inside of these two computers.

A Few Pioneering Things

- Logic built entirely with integrated circuits
- Real-time processing
- Priority multitasking — do the most important things first
- Digital autopilot (vs analog)
- Software engineering
- Crash and restart within two minutes

Software

- Command Module: Colossus
- Lunar Module: Luminary

Mark showed us some of the code which is available for free online.

Using the Apollo Guidance Computer

Mark showed pictures and videos, and he gave detailed explanations of the Display/Keyboard (DSKY) and the control panels of both computers. There were many numeric codes for entering commands and data.

Landing on the Moon

It took 12 minutes for the astronauts to get out of the Lunar Module and onto the moon. There was one attempt, no second chances. Most of the flying was done by the AGC. Three phases were each handled by a separate program.

- The braking phase
- The approach phase
- The landing phase

It's really the computer that has direct control of where the spacecraft is going. It's only in the last phase where one of the astronauts can really guide the computer to where he wants to go.

Ride Along with Apollo 12

On November 9, 1969, Apollo 12 was the second lunar landing mission, and it was the

first precision landing. They needed to land at a specific spot. Mark showed us the data during the landing, including the speed of the spacecraft, timing, altitude, velocity, and distance from landing. We could even listen to the tapes of the astronauts' conversation during the landing.

Legacy

- Margaret Hamilton, the director of the Software Engineering Division of MIT's Instrumentation Lab, was responsible for the development of the software.
- Dr. Charles Draper saw that he could develop a digital computer that could be taken to the moon.

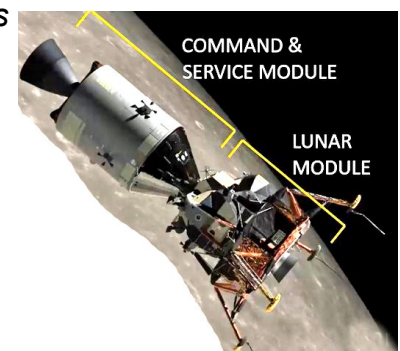
The AGC in Popular Culture

In 1995, the movie, *Apollo 13*, came out. The computer was used a lot in the movie, and everything displayed on the computer was accurate.

Space geeks can obtain working replicates of the AGC and can simulate lunar landings. Mark is building a reproduction of the AGC. Only a single working AGC exists today; there is a long YouTube series on how engineers did it. The actual computer code that was used on Apollo 11 is available online.

After the presentation, Mark answered questions, and LACS member, Larry McDavid, also offered input.

LACS members received the link to the recording of this talk and Mark's slides. Please refer to them for details and fantastic pictures. He also has references to URLs and books for further learning. He gave us his email address if we have more questions. ❖



YOUR 6 STRONGEST PRACTICAL PASSWORD TECHNIQUES, RANKED

By **Leo Notenboom**

The Best of Ask Leo

WWW.askleo.com



Image: canva.com

The password I recall the most vividly was used to access a status terminal in the computer center at school. I don't recall the account ID, but after over 40 years, I can still remember the password.

iforgot

A very memorable, horrible password.

It was appropriate at the time because it was a public-access terminal — anyone could sign in — and for some reason, a password was required. So they made it simple and even posted it on the terminal itself.

There was zero security.

You want something better. There are a number of techniques for generating strong passwords. I'll review some from best to worst.

Your best approach to passwords

1. Long with random characters: *SBH2F%b^xDCUQf5frqBR*
2. A passphrase: long with multiple random words: *drying karen ruth afoot sauce*
3. Medium-length words with padding: **-*-*breakfast pancakes*-**
4. Medium-length words with random characters: *l)ws7.BOZ1*
5. Shorter with padding: **4*iforgot*4**
6. Shorter with random characters: *(8dQ,j)a*

Always use different passwords on every site and use a password vault to track them all.

My Criteria

These are my personal opinions, and they are based on the last 20 years of helping people

with their passwords.

My criteria are simple:

- Passwords must be able to resist every automated brute-force attack.
- Passwords must be very unguessable.
- Passwords must be extremely unlikely to have been encountered anywhere else.

In some cases, but not all, it would also be nice if they were easy to memorize.

I'm ruling out some of the more esoteric approaches, even though they might be secure, because these techniques must be practical as well as secure.

My Assumptions

I strongly [recommend using two-factor authentication](#), but the ranking below assumes you're not. While adding two-factor doesn't change my ranking, in some ways, it minimizes the differences in security between approaches.

I assume you won't use the same password on multiple sites, *period*. That's one of the most dangerous security practices, regardless of the strength of your passwords.

I assume you're using a password vault of some sort. While being able to remember some passwords might be nice, it's just not practical when using strong, long passwords that are different for every account. This is one of the reasons that I and so many others [strongly recommend using password vaults](#): they enable the use of strong passwords on different sites without taxing your memory or your patience.

#1: Long Random Characters

Password: **SBH2F%b^xDCUQf5frqBR**

The most robust approach is the one you may be most afraid of: long strings of completely random characters. The example above is a 20-character password generated by a password manager. However, many other tools generate passwords for you, and

many also let you control what kinds of characters are used.

Since not all special characters can be used on all systems, my own default configuration is using 20-character passwords without special characters. At 20 characters, that's more than sufficiently strong. If the site requires a special character, I'll add one manually.

Using 20 random-character passwords is considered so strong that the length doesn't even appear on many "how long would it take to crack" password reports. The last report I looked at topped out at 14 — and that took 968 *centuries* to crack using a large distributed system (perhaps a very large botnet). So, my recommendation of 20-character passwords is future-proof, and is possible because I use a password vault.

#2: The Passphrase: Long with Multiple Random Words

Password: **drying karen ruth afoot sauce**

These are also known as passphrases.

We all remember "correct horse battery staple" from [the XKCD cartoon](#). That shows you just how memorable words can be. If you can build a picture (as the cartoon describes) of some nonsense scenario involving randomly selected words, all the better to help you recall it without any aid.

Our example — a 29-character password created by five completely random words — is excellent. A five-random-word password would take a large distributed system of many computers 14 years to crack. That seems plenty secure. (Include spaces if you're so inclined and the service supports it. If not, running them all together is also a fine approach: "dryingkarenruthafootsauce", or perhaps capitalize instead: "DryingKarenRuthAfootSauce".)

This is a good solution for passwords you must remember — perhaps the password to your password vault itself.

I use a slightly less secure variation described below.

#2a: Long with Multi-Word Mangled Phrases

Password: **Obi-Wan you're my only soap**

That's memorable, and at 27 characters, it's plenty long to defeat brute force attacks. It's a slight mangling of a phrase that's [well-known](#).

The mangling makes it secure against guessing: it starts two words into the phrase, drops one word, and includes a word not in the original. If that doesn't seem mangled enough for you (though I believe it is), you can certainly do more to obfuscate the actual words used while maintaining the memorability of the phrase. Just remember how you mangle it.

I use this technique for passwords I need to remember. I have a specific phrase *and* the techniques I used to mangle it memorized.

There are many variations of this technique. For example, using the first letter of each apparently random word to spell out a memorable keyword. Remembering *kitten* might be the doorway to help you remember your password as "kitten incite Tuesday tornado else nothing".

#3: Medium-Length Words with Padding

Password: ***-*-*breakfast pancakes*-*-***

Length trumps just about everything when creating a password resistant to brute-force cracking. So, a combination of random or semi-random words with some standard padding can end up being quite secure.

The example here is a password made up of two common words with padding added before and after. In this case, the padding is a pattern. Adding an easily recalled padding pattern to a password or passphrase is a useful technique.

At 28 characters, this password is not going to be brute-forced, and while "breakfast pancakes" might be a word pattern used in some

password guessers, adding a pattern of your own creation thwarts that as well.

#4: Medium-Length Random Characters

Password: **l)ws7.BOZ1**

This is nothing more than our #1 technique but shorter with 10 characters instead of 20. This technique creates a "good" password that would take nine years to crack using a multi-computer attack. You can, of course, adjust the length as you see fit, but for a truly random selection, I would not go below 10 characters.

As a variation that's easier to type, a 12-character password using only upper and lower case alphanumeric characters (example: "qqkCapnm5Jx7") would take 24 years to crack.

This approach is why my current recommendation for basic passwords is 12 random characters or longer, giving you the flexibility to make it easy to type by eliminating special characters if you want.

#5: Shorter with Padding

Password: ***4*iforgot*4***

I keep returning to length and padding as great ways to make those old passwords you remember much more easily secure. In this example, I've taken that memorable but horrible password I used 40 years ago and made it significantly more secure by adding a simple pattern of my own creation before and after. It's now a good, secure, 13-character password.

#6: Shorter Random Characters

Password: **(8dQ,]qa**

If you must use a password less than 12 characters in length — as, unbelievably, some older systems still require — then your only secure option is to use passwords of entirely random characters, including letters, numbers, upper and lower case, and special characters.

This is your "least bad" option under those constraints.

Do This

I will continue to beat the drum for using a password manager for two very important reasons:

- It makes using the most secure techniques for password generation easy.
- It makes using a different password on every site easy.

Add [two-factor authentication](#) for additional security wherever possible, and use the strongest passwords you possibly can.

References

Unless specified otherwise, our example passwords were generated using passwordcreator.org. That site also includes tables calculating how long it would take to brute-force crack different passwords under different conditions.

For related links, videos, and comments visit [Your 6 Strongest Practical Password Techniques, Ranked](#) on [Ask Leo!](#)

Want more help keeping yourself safe and using your technology with less hesitation? [Subscribe to Confident Computing!](#) For less frustration and more confidence, solutions, answers, and tips in your inbox every week. ❖



LACS INFORMATION

PAY DUES BY PAYPAL OR ZELLE

To pay by PayPal, go to this link:

www.paypal.com/paypalme/00001024

and then click on **Send**. You'll be asked to log in to your PayPal account or sign up for an account so that PayPal will know where to get the money to send. Follow the prompts. Once you have entered your dues amount, click on **Add a note**. Tell us of any updated information: physical address, email address, phone number, and what type of dues you are paying: regular, electronic *User Friendly*, etc. or if you don't want your contact information published in the roster.

To pay by Zelle, log into your bank with your username and password.

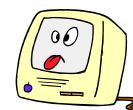
Select **Transfer Money > Send Money with Zelle**. Follow the instructions. The name of the recipient is **Los Angeles Computer Society**. Select **Send by email**. The email address is: **lacompetersociety@gmail.com**. The wording may be a little different on your bank's site. Email questions to Gavin at gmfaught@gmail.com.

HOW TO JOIN LACS'S MAIL LIST

LACS now has **one** active general list: PC@LACS.Groups.IO. Use this email address to ask questions, to offer any comments or suggestions, and to conduct official LACS business.

New LACS members should receive an invitation to join our list with two weeks to accept. LACS members who want to join the list should send an email to LACS+subscribe@Groups.IO from the email address they want to use with their name and phone number. Stephanie, our Groups.IO Coordinator, will check your membership and add you to the PC list. You can contact her at nordlacs@AOL.com

FIX YOUR PC FOR FREE?



LACS member and presenter, **Jim McKnight**, has an open offer to LACS members to diagnose, repair, disinfect, or upgrade members' PC's for free. There are certain limitations to Jim's offer, so see the details by clicking the "Fix my PC for Free?" link at www.jimopi.net.

Non-members can wisely invest in a one-year new regular LACS membership (\$40.00), and Jim will fix your PC problem, too. Contact Jim for specific considerations.

HOW TO CHANGE YOUR CONTACT INFORMATION

Go to www.lacspc.org. Click on **Member Forms** in the bar under the picture. Under **Membership Update**, select **Click Here** to select either the DOC or PDF form. Fill it out, and email it with your changes to or snail-mail it to Membership@lacspc.org

Los Angeles Computer Society
11664 National Blvd. #343
Los Angeles, CA 90064-3802.

ATTENDING A ZOOM MEETING

LACS members who are on our PC email list will receive a link, meeting ID, Passcode, and instructions to attend the LACS general meetings a couple of days before the meeting. **Please let Leah Clark know by the morning of the meeting if you don't have it or have any problem.**

You can put an icon to the link on your desktop so it's handy at meeting time.

1. Right-click a blank spot on your desktop.
2. Select **New** from the drop-down menu.
3. Select **Shortcut**.
4. Type or copy and paste the link in the box that says "Type the location of the item."
5. Click **Next**.
6. Type a name for the shortcut.

**LACS Board Meeting**

Date: Monday, June 5, 2023

Time: 7:00 P.M. (Open from 6:30 P.M.)

Place: Wherever you are via Zoom

Please log in early so we can start on time.

LACS General Meeting

Date: Tuesday, June 13, 2023 via Zoom

Time: 7:00 P. M. (Open from 6:30 P.M.)

Place: Wherever you are via Zoom

Please log in early so we can start on time.

June 5: LACS Board Meeting
June 13: LACS General Meeting
June 14: Flag Day
June 18: Father's Day
June 21: Summer Begins

**VISIT OTHER APCUG COMPUTER USER GROUPS AND SEE THEIR NEWSLETTERS**

Many APCUG groups allow members of other groups to attend their meetings. LACS heartedly welcomes visitors from other user groups, and we are welcome to join other group's meetings.

Go to www.APCUG2.org . Click on **Member Benefits**, then on **Groups Sharing Meetings** or on **Newsletters Online**. A list of groups sharing meetings is arranged by time zones.

UPCOMING MEETINGS/EVENTS

June 13: TBA

June 21: Lunch In-Person Get-Together

See page 1 of this issue.

July 11: TBA

Check your email and User Friendly for updates to this schedule.

ZOOM MEETINGS

Members on our PC email list will receive, via email, an invitation to join LACS Zoom general meetings. Click on the URL in the invitation before the meeting and follow the prompts.

Contact Leah Clark at leahjc@sbcglobal.net if you have any questions or if you don't receive the link by the morning of the meeting day.

ZOOM RECORDINGS

LACS members will receive links to the recordings of Zoom meetings via email.

HYPERLINKS

Underlined text (blue in the colored editions) in User Friendly usually means it's a hyperlink to a website. Copy and paste it into your browser's search or into your address bar. Or click on the link on the online version to see the referenced place.

USER FRIENDLY BACK ISSUES AND INDEXES

To see back issues of *User Friendly*, go to <http://www.lacspc.org/category/user-friendly/>.

For indexes to past issues, go to <https://www.lacspc.org/category/uf-index/>

To find a specific article or topic, use the search box on the top right.

MEMBERS HELPING MEMBERS

LACS members volunteer to help other members solve hardware and software problems by telephone or during the hours listed below. Select the topic from the list and then contact a person whose number is listed next to it.

Find a helper's email address and phone number on your roster. If you don't have your roster, call 424-261-6251. Only members in good standing may receive a roster. We hope you find this LACS free service useful.

If you are experienced using a particular program or hardware, please volunteer to be a consultant. You don't have to be an expert. To volunteer for this list or to make corrections, please email Leah Clark at leahjc@sbcglobal.net or call her at 424-261-6251.

Adobe Creative Suite: PDF,
InDesign, Photoshop, etc. - 10
Android Smartphones - 8
Apple devices - 11
Anti Malware and Backup - 7, 8
Dragon Naturally Speaking - 3
Genealogy - 8
Groups.IO - 8

Hardware - 7
Lotus Word Pro, Approach - 7
Mozilla Firefox - 7
MS Excel - 8, 11, 12
MS Word - 1, 3, 8, 12
MS Outlook - 8, 1, 10
MS PowerPoint - 8, 11
MS Publisher - 2
PDF 24 - 8

Photoshop - 10
Quicken - 8, 12
Thunderbird - 7
Utilities - 7, 8
Visual Basic - 5
Websites - 5
Windows - 7, 8
WordPerfect - 8
Zoom - 2, 9

Preferred Time for Phone Calls			
Number	Name	From	To
1	Beckman, Loling	10:00 AM	6:00 PM
2	Clark, Leah	7:00 AM	5:00 PM
3	Hershman, Irv	11:00 AM	11:00 PM
5	Ialongo, Gilbert	9:00 AM	5:00 PM
7	McKnight, Jim	8:00 AM	7:00 PM
8	Nordlinger, Stephanie	9:00 AM	5:00 PM
9	Presky, Mark	Any	Any
10	Rozek, E. J.	Noon	8:00 PM
11	Van Berkomp, Paula	9:00 AM	5:00 PM
12	Wilder, Joan	9:00 AM	9:00 PM

Note: Times are Pacific Times

OFFICERS, DIRECTORS AND LEADERS

TITLE	NAME	TERM
President	Leah Clark	2023
Vice President	Stephanie Nordlinger	2023
Secretary	Marcia Jacobs	2023
Treasurer	Gavin Faught	2023
Director	Sylvia Davis	2023
Director	Howard Krivoy	2023
Director	Mark Presky	2023
Director	Irv Hershman	2024
Director	Emil Rozek	2024
Director	Annette Tossounian	2024
Director	Paula Van Berkom	2024
Immediate Past President	Stanley Johnson	
APCUG Representative	Leah Clark	
Corporate Counsel	Stephanie Nordlinger	
Database Manager	Donna Benton	
Groups.IO Email Lists	Stephanie Nordlinger	
Newsletter Editor	Leah Clark	
Program Chair	Stephanie Nordlinger	
Publicity – Press	Mark Presky	
Publicity – Online Media	Open	
Quick Consultants	Leah Clark	
Webmaster	Paula Van Berkom	

Mailing Address: 11664 National Blvd., #343, Los Angeles, CA 90064-3802

Website: www.lacspc.org

Contact the President/Editor at 424-261-6251. Follow the prompts. This is a Google Voice number.

Please use your roster for **email addresses and phone numbers** to contact any officer, board member or other member, or you may leave a message at the above number. If you don't have your roster, please contact Leah Clark at leahjc@sbcglobal.net and she will mail you a copy. Only LACS members may receive a roster.

PERSONAL COMPUTER DATABASES

An Overview

by **Tom Burt**, Vice President
Sun City Summerlin Computer Club

<https://www.scscc.club>

tomburt89134 (at) cox.net



Introduction

I've spent much of my career in software development, working with various database programs, including a stint at Ashton-Tate / Borland as Director of the dBase development team. For this month's Tech Notes discussion, we'll do an overview of what database technology is available for regular personal computer users. Interestingly, some of the best database programs are free. The tradeoff is that you must invest some time learning how to use them.

The basic idea of a database is that it's a way to save and organize information so that specific pieces can be quickly retrieved on demand for either display or computational analysis. The most common way this is done is to impose some tabular structure (rows and columns) on the data so that a standardized set of retrieval interfaces can be used. Such databases are referred to as **relational** databases.

A relational database is comprised of one or more data **tables**.

- Each table contains one or more **rows** of data.
- Each row includes one or more **columns**.
- Individual columns have a column name, a size, and a data type such as text, integer, float, date, or Boolean.
- One column is commonly designated the **primary key** and contains a unique value that can be used to identify and refer to that row in the table.

It's possible to link data from one column of a set of rows in a table to the "key" column of a row in another table, creating a relationship between the "master" row in one table and a set of "detail" rows in another. For example: think of the bill for a meal at a restaurant (a row in the Chits table) with the individual itemized entrees, sides, and beverages as details (one or more rows in the Chit_Items table).

To support data retrieval and other operations (e.g., Add, Update, Delete), relational databases use a special language: **Structured Query Language** (SQL for short, often pronounced "sequel"). Many database programs also have a visual front end that makes it easy to design SQL queries that will retrieve specific subsets of the data.

Spreadsheets

Traditional spreadsheet tools like MS Excel or the free LibreOffice Calc are the most straightforward database programs. These have a natural rows and columns structure. It's easy to sort the rows based on values in various columns. You can set filters on multiple columns to display only a subset of the data. A search can also look for specific values in a column or anywhere in the sheet. You can also include computational columns and rows that aren't part of the actual data but "sum up," count, average, or perhaps show minimum and maximum values.

Spreadsheets are great for contact lists, asset tracking, inventories, and catalogs. However, they don't easily support relationships between records in different tables, and there's no SQL support.

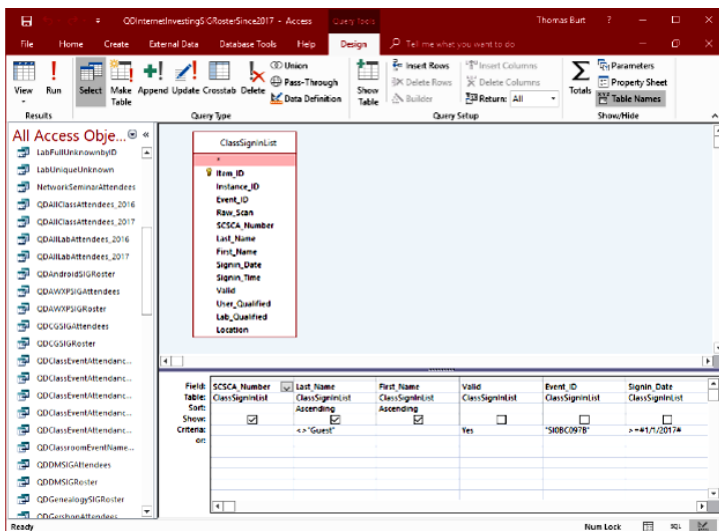
"Flat File" Database Programs

Commercial database programs like **MS Access**, Word Perfect **Paradox** (formerly a Borland product), and **Apple FileMaker** are more full-featured database tools with true relational support and SQL support. These tools can build relatively sophisticated appli-

cations with complex relational data structures, input forms, result viewers, and printable reports. However, these commercial tools aren't free and take some serious time to learn.

These commercial tools support multiple concurrent users via "file server" locking technology on a local area network. Each user runs their copy of the database "engine" to do reads, inserts, updates, and deletes, which can lead to access contention. Performance can become an issue if more than a few concurrent users access the database file(s).

The screenshot following shows an example of the MS Access visual query designer setting up a query to retrieve a list of club members who attended at least one session of the Internet Investing SIG since January 2017.



MS Access Visual Query Designer

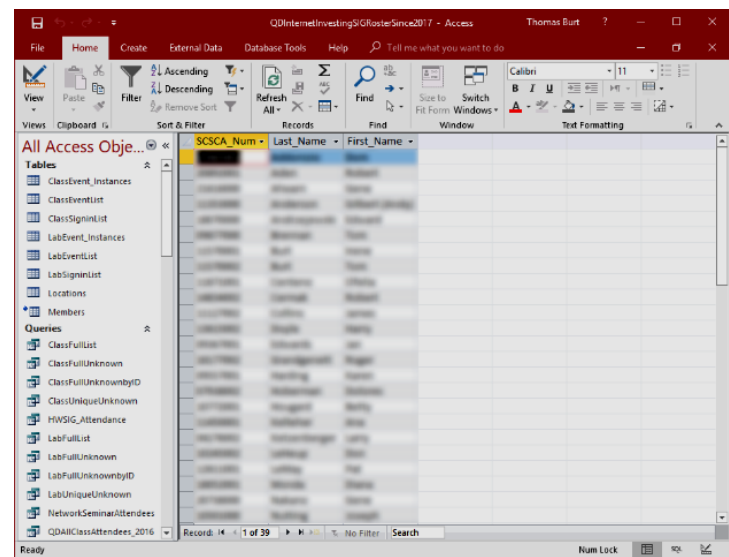
Once the query has been set up, you can click the View button in the ribbon to see the results as a data table. Note that various selection criteria are defined so that we only get the set of rows we're interested in.

The equivalent Structured Query Language (SQL) statement would look like this:

```
SELECT DISTINCT SCSCA_Number,  
Last_Name, First_Name FROM  
ClassSigninList
```

```
WHERE ((Last_Name<>"Guest") AND  
(Valid=Yes) AND (Event_ID="SI0BC097B")  
AND (Signin_Date>=#1/1/2017#)) ORDER  
BY Last_Name, First_Name;
```

The SELECT DISTINCT tells the database engine only to return each unique attendee once, no matter how many times that person attended the SIG. Here's a display of the results of running the SELECT query. I've intentionally blurred the results.



MS Access Results Display Members who attended a session of the Investing SIG since 1-1-2017

I use MS Access and its databases (along with the VB.Net programming system) for the Computer Club's membership roster and the event sign-in systems, which has worked very well in those contexts'

A good **free alternative** to commercial programs is **LibreOffice Base**. It also has a nice visual front end. However, the native database engine in Base is fairly limited, so it's best to use Base as a visual front-end to a more sophisticated database engine/server, such as MySQL or PostgreSQL (see below).

Full-Featured FREE Relational Database Servers

I've recently looked at a few free full-featured

database server products running on Windows. Of these, Microsoft's **SQL Server Express**, **Oracle's MySQL**, and the open-source **PostgreSQL** all combine high-end server functionality and performance with the ultimate low price (FREE). You can run these on the same PC as your end-user applications, or you can run them on another PC acting as a network database server.

At this point, I'm most familiar with Oracle's **MySQL**, which runs on Windows, Linux, and macOS. I've built an experimental version of the club's sign-in system that uses MySQL databases instead of MS Access. As a true database server engine, its performance on a network is much better than that of MS Access. MySQL is often used as the database engine to support websites. It can scale to retrieve thousands of records per second. Despite this, MySQL was swift to download and install on my Windows desktop at home. MySQL is accompanied by the **MySQL Workbench** visual front-end, which isn't quite as nice as MS Access but does a decent job. You can get MySQL at: <https://www.mysql.com>.

SQL Server Express is a free download from www.Microsoft.com. It is a "light" version of Microsoft's very high-end SQL Server that only runs on Windows. SQL Server Express is high-performance and has an excellent visual front-end for designing and managing databases.

PostgreSQL is a free download from www.PostgreSQL.org. It runs on Windows, Linux, macOS, and Unix. In addition, it has a very rich browser-based visual front-end, **pgAdmin**, for designing and managing databases.

Summary

Depending on your needs and skills, a simple MS Excel or LibreOffice Calc spreadsheet may be the perfect solution for managing

your various data collections. Spreadsheets are easy to back up and share with others. For more sophisticated users, the flat file database tools may be the way to go – especially if you're running a small business or supporting a non-profit or charity.

The full-featured database server products may be overkill for a home user, but it's hard to beat the price. To use them, you must

6 FASCINATING FACTS ABOUT THE TELEPHONE

From www.interestingfacts.com

Most of us are familiar with the story of the first telephone call: On March 10, 1876, Boston University professor Alexander Graham Bell reached for the curious invention on his desk, rang up his trusty assistant, and said, "Watson, come here... I want you to look at this text."

OK, maybe not quite. But the moment did mark a seismic change in the history of communications — the birth of a creation that enabled people to bridge the gap across towns, cities, countries, and the world before being repurposed as a means for sending misspelled messages and watching silly videos. Here are six facts about the ubiquitous, often times irritating, but remarkable telephone.

Bell Wasn't the First to Build a Working Phone



Credit: Bettmann via Getty Images

While Alexander Graham Bell is known as the “father of the telephone,” he wasn’t the first to conceive of its existence. Italian-born inventor [Antonio Meucci](#) and the German physicist [Johann Philipp Reis](#) had both previously fashioned functional sound-transmission devices, and Illinois inventor Elisha Gray [submitted a “patent caveat”](#) — a type of preliminary application meant to essentially save one’s space in line — for his version of the phone on the very same day that Bell filed his patent. Gray eventually launched a protracted legal battle for the rights to the patent, but the U.S. Supreme Court ruled in favor of Bell in 1888.

Telephone Numbers Were Once Controversial.



Credit: Jeffrey Coolidge/ DigitalVision via Getty Images

Telephone numbers were first used in 1879, after a measles epidemic hit Lowell, Massachusetts, keeping many of the local switchboard operators — on whom the earliest telephone systems depended — out of work. The response was to designate phone subscribers by number, allowing new operators to quickly get up to speed without knowing the hundreds of local subscribers by name.

Management initially worried that customers would object to numerical identification as dehumanizing. In the 1960s, after most American communities had adopted an alphanumeric system that included the name of the local exchange, customers did indeed balk at the

switch from the alphanumeric system to all-digit phone numbers, with organizations such as the *Anti-Digit Dialing League* emerging to remind the phone overlords that human beings existed within the sea of numbers.

The First Pay Phone Appeared in the 1880s.



Credit: Jericka Cruz/ EyeEm vera Getty Images

A 19th-century Connecticut machinery polisher named William Gray endured a scare when he was unable to access a phone to call a doctor to treat his ailing wife. The good news was that his wife recovered, and the experience drove Gray to develop a coin-operated phone that would be available to the public, and not just for those who could afford an expensive private subscription service.

His first pay phone appeared in a Connecticut bank in 1889, and by 1902, there were approximately 81,000 such contraptions around the country. That number swelled to 2 million by the end of the century, before reversing as cellphone ownership became commonplace leaving only about 100,000 remaining pay phones to be found by 2018.



A Disgruntled Undertaker Created the Automated Phone Exchange



Credit: John Waterman/ Hulton Archive via Getty Images

Around the same time that Gray was tinkering with his pay phone, a Kansas City undertaker named Almon B. Strowger was looking to [circumvent the operators](#) he felt were diverting would-be customers to a competing business. The solution was an electromagnetic-powered automated exchange, which earned a patent in 1891 and was up and running in La Porte, Indiana, the following year. Although the operator workforce continued to thrive into the next century, their population began to dwindle with the onset of improved automated technology in the 1930s. By 2021, there were reportedly just 5,000 employees classified as “telephone operators” by the U.S. Bureau of Labor Statistics.

The First Cellphone Call Was Placed in 1973



Credit: Ben Slater/ iStock

The [first mobile telephone call](#) took place on June 17, 1946, from a car stocked with 80 pounds worth of transmission equipment. However, the handheld cell as we know it can be traced to the work of Motorola executive [Martin Cooper](#), who demonstrated his company’s prototype with a call from a Midtown Manhattan street on April 3, 1973. The first cellphone hit the market 11 years later, in the form of the [Motorola DynaTAC 8000X](#), a 2-pound behemoth that offered customers the chance to talk uninterrupted for 30 minutes (following a 10-hour charge time) for the whopping price of \$3,995.

The First Smartphone Was Introduced in 1992.



Credit: Rob Stothard/ Getty Images News via Getty Images

The next major evolutionary step in phone history came with the introduction of IBM’s [Simon Personal Communicator](#) in 1992. A cellphone capable of sending and receiving pages, faxes, and emails, it was the world’s first smartphone, even if the term hadn’t been coined yet. As with many technological trailblazers, Simon was oversized, expensive, and short-lived. Following the phone’s commercial release in August 1994, IBM sold only about 50,000 units before discontinuing the product early the following year. But there was no going back on the idea, and by early 2023, there were more than 6 billion smartphone subscribers around the world. ❖

WINDOWS FREE PAINT APP

Overview

By **Jim Cerny**

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www.thestug.org vp1 (at) thestug.org

The **PAINT** app (program) comes free with all editions of Windows. It comes with many options for you to create your drawings or images and modify others. I would encourage you to explore **Paint**. You will find it very useful if you take the time to try it! Here is a quick overview of what Paint can do.

If you do not have an icon on your Windows desktop for Paint (and I think you should), you can open the app anytime by clicking on the “Windows” icon on the extreme bottom-left of your screen.



This will bring up an alphabetical list of all your apps in the left column. Scroll down until you see **Paint** and click on it to open it.

In Windows 10, the scrollbar for this list may be challenging to see or find – a curse on the designers who hide stuff – it is very narrow at the top of the list, on the right edge of the list, not the window, just the list column. If your mouse finds it, it should widen to a normal scrollbar width that you can see and use. Windows 11 seems better.

You can find out everything about **Paint** by asking Google and viewing some good videos about using it. But here is a quick picture of its features.

You can open almost any image (photo, drawing, clipart, etc.) in **Paint** (using the “File” tab/menu). The file types that Paint can work with are BMP, JPEG, GIF, PNG, and single-page TIFF formats. Now you are free to play with

that image any way you want. You can draw on it, add text or shapes, crop the image, and much more. You can also save the image (use the “Save as” option), and you can save your image as a different file type.

Have you a desire to be an artist? On the **Home** tab/menu, you can use **Paint** to draw and create your images. Select your color or pick your color from a palette, pick a **drawing tool (pen, brush, marker, etc.)**, the **size or width of your line**, and **draw away**.

There are many useful shapes as well, such as ovals, boxes, arrows, and more. You can even zoom in as close as you wish to see and work with each pixel if you want. That is about as detailed as you can get. Remember, zooming in or out on an image does not change the image size, it just lets you view the image closer or farther away.

If you make a mistake, the “undo” arrow at the top will erase the last thing you did. So will CTRL+Z.) You can resize an image (to save memory size), rotate the image, erase things in the image, or select some part of the image for some action, such as copying or deleting. Yes, you can add text in a “Text Box” or right on the image.

Has **Paint** now sparked some interest? Please use Google to ask about how to use **Paint** and explore its many options. It is a very fun tool, easy to use, and will boost your creativity too! No real paint, no canvas, and no mess! ❖



FOR MANY HELPFUL TIPS AND TRICKS

Go to <https://www.apcug2.org> for all aspects of computing and operating systems.

TECHBOOMERS.COM

For learning how to use internet-based websites and applications for free.

- <https://TechBoomers.com>
- <https://www.youtube.com/watch?v=O2-bwYIYu1I>

SPECIAL OFFERS

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- Members can save at the **Pearson Technology** websites: InformIT, Cisco Press, Pearson IT Certification, Que Publishing, Adobe Press, and Peachpit Press.
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LAUGHING OUT LOUD

March 1876 - Alexander Graham Bell makes the first phone call ever.



Moments later - He is notified that his car's warranty has expired.

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The columns, reviews and other expressions of opinion in *User Friendly* are the opinions of the writers and not necessarily those of the Los Angeles Computer Society. LACS became a California non-profit corporation on July 17, 1991. Its predecessor was the UCLA PC Users Group.

MEMBERSHIP INFORMATION and BENEFITS of MEMBERSHIP

Annual Membership Dues:

Regular New and Renewal,	
Printed Newsletter	\$ 40
Electronic Newsletter	30
Family-Associate	12
Students	18
Contributor	50
Supporter	75
Benefactor	100
Gift Membership	20

A subscription to *User Friendly* is included with membership.

Associate members live in the same household or work at the same address as a regular member; they do not receive their own subscriptions to *User Friendly*, but may read it on the LACS website. **Students** must prove full-time status. A member may give a 1-year, 1-time **gift** to a non-member.

Monthly general meetings

are via Zoom. In-person or hybrid meetings may take place in the future.

Members also enjoy these special benefits:

— **Monthly Newsletter**
User Friendly. We publish your article submissions or free classified ads to buy or sell your computer items.

— **Get FREE help** by phone or email (See your roster) from knowledgeable members who are Quick Consultants listed in *User Friendly*.

— **Get help by email** by using our group email list. Send your questions to PC@LACS.Groups.IO

— **Receive important news** and announcements via *User Friendly* and LACS's email list.

— **Free APCUG** (International Association of Technology and Computer User Groups) **Webinars, virtual conferences, programs, and technical information.** Check *User Friendly* and your email to see what's offered.
— Occasional **free software and computer books**, if you review them for *User Friendly*.

— **Annual Holiday Party**
— **Social Interacting** with others who have like interests in computers and technology.

— **Special Interest Groups** (SIGs) on various topics may be created by members.

NOTE: See page 2 of this issue for an update on the new dues-paying system and for the amount due for each category of membership in 2023.

Date: _____

Check # _____

LACS

New or Renewal Membership Application

See note above for amount changes for 2023

Please mail your dues and this form to:

Los Angeles Computer Society, 11664 NATIONAL BLVD. #343, LOS ANGELES CA 90064-3802

Please PRINT Clearly

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E-mail Address: _____

E-mail of Associate _____

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Publish Contact Info in Roster ☐ Yes ☐ No

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ProofreadersIrv Hershman,
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and Charlotte Semple

User Friendly is published by the Los Angeles Computer Society.
11664 NATIONAL BLVD, #343 LOS ANGELES CA 90064-3802
Voice-mail: 424-261-6251. Web site: <https://www.lacspc.org>

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GENERAL MEETINGS ARE ON ZOOM.

Before each meeting, members and invited guests will receive an email with the URL link to the meeting. If you haven't received it by the morning of the meeting, let Leah Clark know. When you click on the link, you will enter a waiting room. Then the host or a co-host will admit you to the meeting.

Please try to arrive at least a few minutes before the meeting start-time so you don't interrupt the meeting and any technical problems can be solved. If you need to take a break during a meeting, do not click on Leave or End. If you do, the meeting will be interrupted for someone to re-admit you from the waiting room. You may turn off your video when you are gone.