

# Interface

Lorain County Computer Users Group  
[LCCUG.com](http://LCCUG.com) (or) [info@LCCUG.com](mailto:info@LCCUG.com)  
Volume 35 Number 5 May 2024



2024

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**Tuesday**  
**May 14, 2024, 10:00**



## HODGEPUDGE



*Presented by*

**LCCUG OFFICERS  
&  
APCUG VIDEOS**

*Presented by*

**LCCUG OFFICERS & APCUG VIDEOS**

*Part 3*

**Our links can be found at:**

[LCCUG.com/links](http://LCCUG.com/links), There you will find many interesting places to visit. Check them out and see what you can find interesting

**All Meetings will be Virtual and Zoom**  
**This month's meeting is on Tuesday May 14, 2024 at 10:00 AM**

**LCCC Community Learning Center**  
201 W Erie Ave, Lorain, OH 44052

Please Email: [info@lccug.com](mailto:info@lccug.com)  
if you have any questions or concerns!



# A Word From Our President



Our May meeting will bring us back to Tuesdays and back at 10 am. Hope you can make it on May 14 either by ZOOM or in person!!

You should have received a copy of our survey to the membership. You can answer it in the email by clicking reply and let us know your answers to the questions. It is also in this newsletter and you can reply to it any way you choose. We would like to know how our members would like to see us proceed.

We had some technical difficulties during our April meeting that we think we have fixed. Join us and find out!!

Last month we did a hodgepodge of several technology items that you can review at our links page at <https://lccug.com/links/> I know I like to watch them again when I'm trying to implement those tips and tricks!

For our May meeting we will do more of the same.

As we look toward the future, the impact of technology on our lives is undeniable. By **2040**, nearly a quarter of the U.S. population—**80 million citizens**—will be **65 years or older**. As new technologies continue to evolve at a rapid pace, it's crucial to consider how these changes affect us.

Join us as we attempt to keep up!!

*Sandra Ruth*  
*LCCUG President*



## LCCUG Officers For 2024

<b>President</b>	Sandee Ruth president@lccug.com
<b>Vice President</b>	<b>Vacant</b> vp-programs@lccug.com
<b>Secretary</b>	Don Hall secretary@lccug.com
<b>Treasurer</b>	Micky Knickman treasurer@lccug.com
<b>Newsletter Editor</b>	Pam Rihel newsletter@lccug.com
<b>Web Page Editor</b>	Richard Barnett webpage@lccug.com
<b>Statutory Agent</b>	Sandra Ruth statutory_agent@lccug.com
<b>Director of Membership</b>	<b>Vacant</b> membership@lccug.com
<b>Director of Advertising</b>	Richard Barnett advertising@lccug.com
<b>Director of Education</b>	Neil Higgins education@lccug.com

## Woohoo!



Your renewal dues have been changed from \$15.00, To 3 years for \$15.00. When everyone else is raising their prices our Computer Club is lowering their dues, so tell your friends to come and Join in the fun and learn computer information.

Tell your family and friends about this great deal. Once in a lifetime opportunity.

LCCUG  
Director of Membership,  
membership@lccug.com.

**Tuesday  
May 14, 2024, 10:00**

# HODGEPODGE

*Presented by*

## **LCCUG OFFICERS & APCUG VIDEOS**

*Part 3*

Our May meeting will be a hodgepodge of tips and tricks again. This month we will be looking at some good short videos and we will learn new skills.

We will be looking at tips to make your internet browsing easier.

Then we will learn something new when we watch videos about using Artificial Intelligence, and much more.

### **LCCUG is on Facebook**

Come and visit our Facebook page for interesting facts and ideas. You can get a lot of computer information from our Facebook page. Have a question ask it on Facebook.

<https://www.facebook.com/groups/lccug>

### **Genealogy Tip of the Day**

<mjnrootdig@gmail.com@bounces.cloud2.em.secureserver.net>

### **Buried in Your Files or Piles?**

admin, 03 May 08:17 AM

We all have information, records, or other bits of genealogical data that we have not analyzed, put in our organized materials, shared with others, etc. Do you have a pile of papers in your genealogical work area that you have let accumulate over time without doing anything with? Do you have images of family history materials in your downloads folder that you saved ages ago with the intent of working on—but are still sitting there accumulating age?

It's fun to make discoveries, but working with what we've had for some time may result in the best discovery of all—that the answer to our problem was already in our files or piles. Or at the very least we're preserving something that may have otherwise eventually died at the bottom of our file—either in paper or digital form.



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## Executive Board Meeting Minutes

**APRIL 2, 2024**

The board Zoom video meeting for April was attended by Sandee Ruth, Don Hall, Micky Knickman, Pam Rihel and Neil Higgins.

Micky sent a \$200 check to Second Harvest from the Computer Club.

Sandee will send out a Questionnaire to all members in the hopes they will respond with their likes and dislikes.

Don was requested to keep meeting attendance records of zoom and in-person participants.

We will resume the general meetings at 10AM the second Tuesday of the month starting in May.

Discussion on eating out after the meeting will continue next month.

Neil moved, Pam seconded the meeting be adjourned.



## General Meeting Minutes

**APRIL 11, 2024**

President Sandee Ruth called the hybrid meeting to order. A motion to accept the minutes as shown in the April issue of the *INTERFACE* was made by Pam Rihel and seconded by Vera Cooke. Motion passed by voice vote.

Sandee is sending out an e-mail questionnaire to members requesting their feelings for the future of the club.

Sandee informed members the General Meeting will resume on the second **Tuesday at 10 AM May 14.**

Micky and Sandee continued to present an informative program "Hodgepodge & Tips" covering the many things they found on the internet including a timer for taking selfies.

Pam Rihel moved, Nancy Smith seconded the meeting be adjourned. Motion passed by voice vote.

### MEMBERSHIP WITH LCCUG:

Yearly dues are now \$15.00 For 3 years. For more information contact:

LCCUG  
Director of Membership,  
[membership@lccug.com](mailto:membership@lccug.com).

Meeting Location:  
At a new time: from 10 am. - noon  
in a new location: LCCC facility at  
[201 W. Erie, Lorain](#)

Our meeting space is on the first floor – easily accessible – larger – refreshments available!  
Please email  
[info@lccug.com](mailto:info@lccug.com) if you have any questions.



### The Lorain County Chapter of OGS

is having its next meeting online:

**Check our webpage for the next program.**

<http://loraincoogs.org/events.html>

We are having our meetings virtually only, using Zoom

[https://zoom.us/j/6681479672?](https://zoom.us/j/6681479672?pwd=amh0NmtmalZWa0lmRWVBWEwySkxmZz09&omn=92912561207)

[pwd=amh0NmtmalZWa0lmRWVBWEwySkxmZz09&omn=92912561207](https://zoom.us/j/6681479672?pwd=amh0NmtmalZWa0lmRWVBWEwySkxmZz09&omn=92912561207)

Lorain County Chapter is inviting you to a scheduled Zoom meeting.

Meetings are free and the program begins at 7:00 PM.

John Kolb  
[secretary@loraincoogs.org](mailto:secretary@loraincoogs.org)



**Newsletter Editor:** Pam Rihel using Microsoft Publisher, 2019

**This Month's contributors:** Micky Knickman, Sandra Ruth, Pam Rihel, Don Hall, Neil Higgins, Michael John Neill, Dick Maybach, Adobe Stock, Scambusters, Ask Leo, APCUG, Google mages, Microsoft Office art online, AARP

Newsletter is now  
Online at:  
[lccug.com/newsletters](http://lccug.com/newsletters) or [lccug.com](http://lccug.com)

# Lorain County Computer Users Group

2024 Calendar of Events

<http://lccug.com>  
email: [info@lccug.com](mailto:info@lccug.com)



**Using Zoom & In Person**  
Meeting & program starts at 10:00 am

*2<sup>nd</sup> Tuesday of each month. Changes are announced on the webpage and the newsletter.  
All meetings are open to the public*

If you have anything you would like to know about, PLEASE let up know. We would really like your input.

January 11, Thursday Wireless 5G Internet services

February 8, Thursday HodgePodge

March 14, Thursday Glenn Pubal from Royal Business in Elyria

April 11, Thursday HodgePodge

May 14, Tuesday HodgePodge Part 3

June 11, Tuesday

July 9, Tuesday

LCCUG

Genealogy Tip of the Day  
<[mjnrootdig@gmail.com](mailto:mjnrootdig@gmail.com)>

## A Cousin By Any Other Name

admin, 04 May 05:37 PM

“Cousin” is one of those words that people sometimes use in a variety of ways. It may mean first cousin (where two individuals have parents that were siblings), it may mean a more distant cousin relationship, it may be a cousin-by-marriage, someone who is related in an unknown way, or someone who may not even be related at all.

Genealogists are sometimes precise in their use of cousin relationships. Other people often are not and sometimes genealogists find it easier to use the word “cousin” instead of the precise term for the relationship.

Don't assume the precise nature of the relationship when someone is referred to as a “cousin.” Research it to try and determine what it is.

And remember that there's always the chance that the person's not actually related at all. Your ancestor may have said on his immigration papers that he was coming to live with his “cousin” when in fact that “cousin” was simply a former neighbor who agreed to help him get settled and saying they were “cousins” made the paperwork flow a little easier.

## Research Cheat Sheet?

admin, 07 May 08:46 PM

Before going to the library, courthouse, or other research facility, considering creating a short “cheat sheet” of key terms you will use while there that confuse you. It may not be practical to constantly “google on the go,” and sometimes time can be saved by making a quick referral to double check the meaning of a word or term. Grantor and grantee are two terms that people often get confused—and that confusion can easily cause the researcher to waste valuable time.

# NEED HELP?



## Here's Who to Contact:

### Neil Higgins

440-985-8507 - [higgins.neil@gmail.com](mailto:higgins.neil@gmail.com)  
Evenings 6 p.m. -10 p.m. + Weekends  
Hardware, Linux & Windows Operating Systems,  
Chromebooks, Tweaking your system

### Micky Knickman

440-967-3118 - [micky@knickman.com](mailto:micky@knickman.com)  
Daily 5:00 am to 3:00 pm. Leave message if no answer.  
General Software Configuration, Hardware Installation, Basic to Advanced Windows

### Richard Barnett

440-365-9442 - [Richard216@aol.com](mailto:Richard216@aol.com)  
Evenings & Weekends  
General Software Configuration, Hardware Installation, Basic to Advanced Windows & Web Page Design

### Sandee Ruth

440-984-2692 - [sandee29@gmail.com](mailto:sandee29@gmail.com)  
Basic Word Processing, Windows, & Web Design  
Advanced Internet

### Pam Casper Rihel

440-277-6076 or 440-308-8196  
6:00 p.m. to 9:00 pm Monday thru Thursday  
Genealogy help  
[prihel1947@gmail.com](mailto:prihel1947@gmail.com)

### Denny Smith Unavailable at this time

440-355-6218 - [dennis.smith@windstream.net](mailto:dennis.smith@windstream.net)  
Microsoft EXCEL  
Leave message on machine if no answer

If any of our members are interested in helping other users with what programs you are adept at, please contact any of our officers with you name, what program or programs you would be willing to give help with, you email address and or phone number and when you would like to have them call you. Thanks



## LCCUG ONGOING WORKSHOPS

ALL ARE FREE AND SOME ARE OPEN TO THE PUBLIC

### Problem Solving Workshop

**Date:** Tuesday– May 14, 2024  
**Time:** 12PM –Please show up by 11:30  
**Instructor:** Micky Knickman  
**Place:** LCCC @ 201 W. Erie Ave., Lorain, OH

Learn how to repair or update your computer by changing hard drives, memory, CD ROMs, etc.

**This workshop is limited to LCCUG members in good standing.**

The Problem Solving Workshop is being held at our new building, LCCC, 201 W. Erie Ave. Lorain, Ohio

You are asked to bring in your computer, laptop and other electronics that you need help with unless the problem/question can be replicated on any device.

### Learning About Electronics

**Date:** Tuesday- May 14, 2024  
**Time:** 12PM –Please show up by 11:30  
**Instructor:** Sandee Ruth  
**Place:** LCCC @ 201 W. Erie Ave., Lorain, OH  
**Learn how use you electronic devices.**

Members are encouraged to bring their tablets, iPod, kindles, etc. for assistance from Sandee and any other knowledgeable members. The public is welcome to sit in on these sessions.



Member of Association of Personal Computer Users Groups

## USE THESE TIPS TO AVOID ONLINE TRADING SCAMS:

INTERNET SCAMBUSTERS #1,114

Many small investors are now able to buy stocks, cyber currencies, and more via online trading sites.

## DON'T GET SCAMMED BY FAKE ONLINE TRADING SITES

Online trading – buying and selling stocks, shares, currency, cybercurrency, and commodities – has made it easier than ever for ordinary folk to invest and speculate. Millions of us do it. But beware – scammers have set up fake trading sites to grab your money, and you'll never see it again.

As the US Commodities Futures Trading Commission (CFTC) warned in a recent alert: "It doesn't matter how much scam trading websites claim you will earn, or how easy or risk-free they say it will be, you will lose any money you give them."

These fraudulent websites often mimic genuine trading sites, making it difficult to spot them at first glance. So, how can you tell if a site you're thinking of using is genuine?

## 12 WAYS TO HELP YOU SPOT FAKE ONLINE TRADING SITES

1. **Research.** Yes, we always stress the need to thoroughly check out any site or organization before giving details about yourself or parting with money. Check for reviews and verify them with official sites like the CFTC and the Securities and Exchange Commission (SEC). Some more details are given below.

2. **Website authentication.** Are you where you think you should be? Look at the address bar – is it absolutely correct? Is it secure (with a padlock and "https" at the front)? And who owns the website and how long has it been up? Find out at [ICANN Lookup](#).

3. **Regulation.** Ensure the supposed trading

platform is registered with the above or other regulatory authorities. Ignore logos and other official-looking "seals;" they may not be genuine.

4. **Clarity.** Does the site provide its address and location, which you can check with Google Maps? Is there verifiable contact information? Does the site include detailed terms of service and privacy policies? If it's not clear, vague, or confusing, move on. Beware of any sites that don't have a US headquarters.

5. **Promises.** Anything that promises big and/or guaranteed returns is probably a fake. Instead, there should be a risk warning. Beware too of statements urging immediate action.

6. **Customer service.** Check them out. Contact any posted customer service address or phone number with a couple of questions and gauge how they respond. They should be prompt and professional.

7. **Site appearance:** While some fake sites mimic genuine ones, others are created by scammers. These may be poorly designed and have spelling or grammar mistakes. Or they may have links that don't work.

8. **Social media.** Many online trading sites, especially fraudulent ones, first show their faces on social media in ads or questionable messages. But reputable ones may also show up from time to time. The difference is the good guys will have a reliable social media presence where they post regularly. The baddies will not.

9. **Endorsements.** Some scammers have hijacked the names of well-known businesspeople and celebrities. Ignore these but do look for endorsements and testimonials from verifiable sources.

10. **Spam etc.** Don't respond to unsolicited calls and messages or spam that finds its way into your inbox. Equally, be wary of "recommendations" that seem to come from family or friends. Their accounts may have been hacked.

11. **Transfers.** If the site won't connect to your bank or other financial institution, it's probably a fake – scammers know a genuine bank will spot them as frauds. Instead, the scammers will try to talk you into chang-

ing your dollars into Bitcoin on a legitimate site and paying with this untraceable currency.

**12.Awards.** Another trick scammers use is to claim they've won awards in the financial sector. But if you check these out, you'll find either that they don't exist or that they're simply not credible.

get some or all of your money back. And you'll be helping others avoid the same mistake. Finally, trust your instincts. If you feel uncertain about a site or just have a negative gut reaction, go with that feeling and look elsewhere.

Crypto currency trading is the big thing right now, so that's where you'll find most of the scammers. As the CFTC notes, "Cryptocurrency trading platforms are considered money service businesses (MSBs) by the US Treasury and must register with the Financial Crime Enforcement Network (FinCEN)."

Some states actually have additional requirements for currency traders to register. Be sure to check their registration.

If you do, sadly, get scammed with a fake online trading site, make sure you report it. That way, if there's any chance at all, you may get some or all of your money back. And you'll be helping others avoid the same mistake.

## THIS WEEK'S ALERTS

**Speaking to celebrities:** Who wouldn't want to talk to their favorite celebrity? But chances are high they don't want to talk to you on the phone. Yet hundreds of social media users are falling for a scam, driven by artificial intelligence (AI), that mimics the voices of celebrities and, of course, ends up asking them for money or confidential information. Fake social media pages in the names of some celebrities carry messages inviting followers to call for a chat – often with the promise of a romantic relationship. Think about it and you'll realize it's a scam.

**No wedding:** And who wouldn't like an invitation to a wedding, especially if it's someone important. It may sound implausible but, according to security firm F-Secure, people, especially older folk, are being taken in by invitation messages on WhatsApp on their Android cell phones. The messages have a supposed invitation card attached. But if you click on it, you'll get a delivery of malware onto your phone.

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<http://www.scambusters.org>

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## I Got a Call from Microsoft and Allowed Them Access to My Computer. What Do I Do Now?

### *It's a trap!*

by [Leo A. Notenboom](#)



A very common scam has people supposedly from Microsoft, your ISP, or other authorities calling to help you with computer problems. Don't fall for it.

### **Question:**

*A family member got scammed by a telephone call from someone saying that they were from Microsoft and calling because of PC error reports. Unfortunately, remote access was given. What should be done to prevent further compromise of the PC data? Help!*

*Note: MS scanner and a Norton scan were done and showed no problems. Remote access software files were removed manually from PC. Could the scammer again access the PC data? Data is backed up to the external drive (not plugged in at the time of the scam). Can the same files/data be safely loaded onto a new HD/computer?*

As you point out, *it's a scam. Microsoft doesn't call people because of errors on their computers.* Neither do ISPs, security companies, or pretty much anyone else who might have some role of internet authority.

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To quote [Admiral Akbar](#), “It’s a trap!”

In recent years (yes, *years*) I’ve received many reports of this scam and its variants. Fortunately, many people are rightfully suspicious and cut it off before it goes too far. Unfortunately, your family member having fallen for the scam puts you in a difficult and dangerous position.

Let’s not hook up that external hard drive just yet.

### The remote access trap

Legitimate companies don’t request remote access via cold calls. Period. If you’ve fallen for it, take these steps.

- Alert your credit card issuer about potential fraud.
- Restore your machine from a recent image backup.
- Alternatively, back up data, reformat your hard disk, and reinstall your operating system to ensure the removal of any hidden malware.

### The Scam

Here’s how it works: someone calls you claiming to be from Microsoft, your [ISP](#), your security software provider, or some other important-sounding company. **They’re lying. They’re not any of those.** The companies these scammers claim to be from *are not involved in any way*. They do not call people out of the blue and offer to help.

The scammers claim they’ve detected your computer is causing many “errors on the internet” or that there are “problems with your account”. To prove there’s something wrong, they ask if your computer has been crashing recently. Or they have you open up the [Event Viewer](#) and point out the many errors listed therein.

And, of course, they can fix it for you.

The scammer then asks you to allow them to access your computer. **DO NOT LET THEM.**

Typically, they have you connect to a remote access site such as [logmein.com](#) or other similar services so you can give them access to

your computer. **Important:** Sites like [logmein.com](#) and others *are not involved* in the scam. They’re just the tools the scammer uses to access your machine.

This leads to the scam’s hook. While accessing your machine, several things may happen.

- The scammer may install malware.
- The scammer may “discover” that to fix your (non-existent) problem, you’ll need to purchase something.
- You may be quoted a high price for this “service”.
- If you provide payment information, it may be used not only for that fee but for more purchases you haven’t authorized.

In the end, you’re either left with a malware-laden machine (that hasn’t been “fixed”), bogus charges on your credit card, or both.

It’s a classic scam.

It’s highly technical, often incomprehensible, and really only useful to experienced technicians and software developers.

And here’s the kicker: **errors and warnings are normal and expected in EventViewer.** It’s very common to have lots of red stop signs and yellow warning signs in the list of events displayed.

Put another way, seeing errors and warnings in EventViewer does **not** mean that there is anything wrong with your system.

Don’t believe anyone who calls you up and tells you differently. They’re wrong. Using EventViewer to misguide you like this is a classic sign of a scam.

### Avoiding the scam

Classic scam-avoidance 101: **Never completely trust someone you don’t know who calls you.** (Scam avoidance 102: Don’t answer phone calls from numbers you don’t recognize.)

Listen to them if you like. Ask questions if you feel so motivated, but *never ever* give them access to your PC and *never ever* give them

(Continued on page 10)

(Continued from page 9) Ask Leo

your payment information.

Instead, let them know you'll have your local tech support look into it (even if you don't have one).

Once it becomes clear that you aren't going to fall for the trap, it's likely they will hang up. The caller may even become abusive. At that point, you hang up on them.

If you're concerned there is a real problem with your computer, do the research yourself, or contact the technical resources you trust and ask them about it. Chances are there's nothing going on at all.

### Recovering from the scam

If you handed over payment information, you've just given that information to a complete stranger. Immediately contact your credit card issuer or other payment provider and put them on fraud alert.

If you allowed the scammer access to your machine, things can get ugly.

**You have no idea what they did.** If you saw them install software in the guise of tools to help repair your system, it's possible there's a bundle of malware now residing on your machine, which they could use to continue accessing your machine, even after you hang up.

Even if you didn't see them download something, they still could have placed malware on your machine.

### How Do I Remove Malware from Windows 10 or 11?

Trying to remove malware? I'll walk you through the steps and options, from simple to hard, including the only approach that's guaranteed to work.

There's no way to **prove** they didn't load your machine up with **malicious software**.

There are two approaches you can take at this point.

#### Assume the worst.

- Revert to a system **image backup** taken before the access was granted.

• Or

- **Back up** your data, reformat your computer, and reinstall Windows.

- This is the only way to know whatever the scammer might have left on your machine is truly gone.

#### • Hope for the best.

Run up-to-date anti-virus and anti-spyware tools after making sure that each is running with an up-to-date database. I'd be tempted to scan with an additional tool or two.

Once you've done one of these, it's safe to once again hook up your external disk.

### It's a scam

As I update this article in 2024, this scam has been happening regularly for well over a decade with no signs of letting up.

The best defense is to not fall for it in the first place. If you do, the next best thing is to make sure you have regular system backups you can revert to.

And if you walk away remembering just one thing, remember this:

#### **They won't call you.**

If "they" do, be very, very suspicious.

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## Reflections on the PC Environment



By Dick Maybach, Brookdale Computer User Group

[www.bcug.com](http://www.bcug.com) [n2nd@att.net](mailto:n2nd@att.net)

The PC world was far simpler when I began writing PC tech columns in 1992. Many of us relied on diskettes for storage; if we had a hard disk, it held only a few hundred megabytes. Software was distributed on diskettes, and its box usually contained a manual. Windows 3.1 appeared that year, and it was the first version that was really practical, but many continued to

use DOS. Significantly, Windows required a hard disk; when we used DOS, two diskette drives provided adequate storage. The PC was undergoing a transition from an experimental and educational toy to an essential information appliance. The Internet was available only to governments and large corporations, although some exchanged messages through software bulletin boards, which they accessed (slowly) over telephone lines using dial-up modems—even simple configuration changes required opening the system case to access jumpers and expansion cards. There were frequent PC shows where dozens of vendors sold hardware and software. Bookstores had extensive collections of PC books and magazines. It was an exciting time for us.

The situation is far different today. Most PC users, excluding those reading articles like this, have no interest in what goes on inside the box. They would no more open a PC case than a dishwasher cabinet. As a result, PC books, magazines, and parts vendors have largely disappeared. This is good for most folks who want to communicate with friends and family, surf the Internet, and prepare taxes. But it can be frustrating for those of us who see the larger potential of the PC. However, the barriers are superficial, and the experimental and educational world is still alive, well, and accessible on the PC. We must exercise more care while experimenting with our PCs than we did years ago because it's become a vital tool in our lives and holds valuable information we have to protect. Let's look at some of the opportunities.

For years, I took pictures with a 35-mm camera, and film and processing cost about a dollar a click. Editing required a darkroom, expensive equipment, and smelly chemicals, and few did it. Today, we don't use film; bytes are free, and image processing software costs vary from reasonable to free. Any imaging program can do things that darkroom users couldn't even imagine. When you've finished the processing, you can send the results anywhere in the world for free or, if you have a suitable printer, commit it to paper. Image editing can be complex, and it

takes some effort to learn, but there are very few photos that can't be improved, many substantially. I use the GNU Image Manipulation Program (GIMP), <https://www.gimp.org/>, to retouch JPEG image files. Your camera compresses images to produce JPEG files and discards information in the process. You can often recover this by working with images before they are compressed, using RawTherapee, <http://rawtherapee.com/>, or darktable, <https://www.darktable.org/>. These are complex programs that require some effort to master.

Early PCs limited your programming to BASIC, which, as its name implies, has quite limited potential. However, we have a much wider choice today, including Python, <https://www.python.org/>, which provides an accessible start to programming and includes widespread features among all programming languages. In addition, the required software is free, and although some support tools are not, they aren't really necessary.

Experimenting with operating systems does require care, as what seems like a simple configuration change can wreak havoc and sometimes require re-installation. (Ask me how I know.) For this, I prefer using a virtual machine, such as one managed by VirtualBox, <https://www.virtualbox.org/>, for this. In the past, I used dual-booting to install an alternative OS, but this requires re-partitioning the hard disk, which is risky, and the UEFI BIOS in modern PCs has features to protect the installed OS. Working around these requires non-trivial expertise. Your OS views each virtual machine as an application, which avoids all this risk and complexity. If you want to experiment with Windows, you'll have to buy the software, as the virtual machine is legally a different machine. Of course, you can experiment with Linux for free.

Arduino, <https://www.arduino.cc/>, provides an inexpensive way to experiment with both hardware and software. This microprocessor on a small board plugs into a USB port on your PC, which supplies the power for the board and communicates with it. You program in a variant

*(Continued on page 12)*

of C++, which you compile on your PC and download to the Arduino. It's easy to connect the board to external circuits, so this provides a way of learning circuit design and programming. Since all the action takes place off your PC, the risk is minimal.

The Raspberry Pi, <https://www.raspberrypi.com/>, provides a considerably more complex environment than the Arduino. This is a complete PC on a circuit board about the size of a playing card. While the Arduino is a controller that runs only a single program at a time, the Pi is a complete computer running Linux. You'll need a display, mouse, and keyboard to get started, making this more difficult than an Arduino. However, you can use its peripherals if you have a desktop system. (You might use a USB hub to consolidate the keyboard, mouse, and printer cables. Then you could switch between your PC and the Pi by swapping just two cables, the USB from the hub and the HDMI from the display.) After configuring the Pi, you can connect it to your home network and access it using remote desktop software on a PC; it won't need dedicated peripherals until you install a new OS on the Pi.

Fabricating objects used to require a shop and tools, but now it can be done with only a 3D printer, about the size of your existing one. You design an object using CAD software, transfer the file to the printer, and (perhaps some hours later) return to find the completed object sitting in the printer. This is an emerging technology and presently is quite limited. Printing is slow, set-up is fussy, and the material is usually plastic, but things are rapidly improving. For example, I recently saw a device, <https://snapmaker.com/>, that could also machine aluminum and cut sheet material and create with plastic. Currently, the projects are limited to small enclosures, key fobs, game tokens, or similar small objects, but this will surely improve.

To learn about electronics, instead of acquiring a collection of tools, parts, and instruments, you can run experiments with a circuit simula-

tor, such as KiCad, <https://www.kicad.org/>. It lets you build circuits with simulated resistors, capacitors, inductors, transistors, and integrated circuits, then test the result. The next step would be to use an Arduino with a prototype board into which you plug physical components to build circuits you've simulated. Kits that facilitate this are available from such vendors as Adafruit, <https://www.adafruit.com/>. Because you are using Arduino to generate signals and detect the result, this approach limits you to low frequencies.

If you play a musical instrument, you probably have a collection of scores, some of which are barely legible. However, you could input them into a score composing program such as MuseScore, <https://musescore.org/en>, to make corrections, transpose them to a new key, or just clean up the appearance.

These examples reflect my interests and my preference to use open-source software; your interests and preferences are undoubtedly different, but perhaps these examples will inspire you to search for some that would help you. In the past, we relied on PC magazines to suggest areas to explore. There are many more interesting and useful tools today, but it takes more effort to find them without magazines. Don't let your PC become just an appliance; it can be a wonderful tool to help you enjoy life.

I've been writing these articles for a long time, have about run out of things to say, and it's time to retire. Thank you for your attention over the years.



Please send us a separate email with this information for us to consider.

At [president@lccug.com](mailto:president@lccug.com)

Or send by snail mail to Sandee Ruth, 172 Woodhill Dr. Amherst, OH 44001

## 2024 LCCUG Survey

1. How do you want to receive notifications from LCCUG: email \_\_\_\_\_?
2. or text \_\_\_\_\_?
3. Do you prefer to attend meetings by ZOOM? \_\_\_\_\_ or in person \_\_\_\_\_ both \_\_\_\_\_
4. What is your preference for meeting times?
5. Tuesday \_\_\_\_\_ Thursday \_\_\_\_\_ Other \_\_\_\_\_
6. Time 10 am \_\_\_\_\_ 11 am \_\_\_\_\_ other \_\_\_\_\_
7. What topics would you like to learn more about?????
8. Are you interested in how to use Artificial Intelligence? \_\_\_\_\_
9. Are you interested in meeting socially for lunch occasionally? \_\_\_\_\_
10. After the meeting? or another day? Or evening? \_\_\_\_\_
11. Do you do most of your technology on a phone \_\_\_\_ tablet \_\_\_\_ or computer \_\_\_\_\_
12. What could we do differently? - \_\_\_\_\_
13. What topics would you like to learn more about?????
14. Are you interested in how to use Artificial Intelligence? \_\_\_\_\_
15. Are you interested in meeting socially for lunch occasionally? \_\_\_\_\_
16. After the meeting? or another day? Or evening? \_\_\_\_\_
17. Do you do most of your technology on a phone \_\_\_\_ tablet \_\_\_\_ or computer \_\_\_\_\_
18. What could we do differently? - \_\_\_\_\_

**Reminder Dues are still 3 years for \$15**