Software For Free

Software licence costs are one of the major issues when owning a computer. At best, it is an irritant, at worst it can lead to owners not purchasing essentials such as virus protection.

This document gives details of some of the large range of free software available on the web.

Understanding Licence Agreements

Open Source Software

This is copyrighted software, with the source code being published online and made available for anyone to copy, modify and redistribute to anyone. This software is free for anyone to download and use. The School of Computing Science and Digital Media prefers to use open source software where possible so students can obtain this software on their personal machines.

Freeware

This is copyrighted software that is given away for free by the original author. Companies often make a free version of a commercial product, but with less features or less functionality than the full product.

Shareware

This is similar to freeware, however the software usually has a trial period which then required you to pay afterwards.

Operating Systems

Linux

Linux is a free Unix-based operating system. It is developed under the GNU General Public License, and is freely available for anyone to use. There are several different versions of Linux.

- Ubuntu https://ubuntu.com/download/desktop
  Ubuntu is one of the most commonly used versions of Linux. It can run directly off a USB pen or CD or installed onto a computer. There are multiple versions of Ubuntu. The latest release is 19.04 (April 2019), however this is only supported for 9 months at the time of release.

  The latest long term support (LTS) release is 18.04.2 (April 2018) and is supported for 5 years from the time of release (2023).

- Debian https://www.debian.org/distrib/
  Debian is another version of Linux. A branch of Debian is used on the Raspberry Pi, called Raspian, which is also available for free.

  A new stable branch of Debian is released every 2 years, which is supported for 3 years from the time of release.

- Linux Mint https://linuxmint.com/download.php
  There are multiple versions of Linux Mint, Cinnamon and MATE. Both are similar to each other, however the Cinnamon interface is similar to Windows and has a darker theme. The latest LTS release is 19.1 (December 2018), which is supported for 5 years after release (2023). Both Cinnamon and MATE are available here.

- Windows 10 https://portal.azure.com
  Windows 10 is available for free for School of Computing students. You can download it at the link above. Simply search for "Education" in the search bar at the top of the page, and click on software on the sidebar. From there, you can search for Windows 10.

If you have a Windows or a Mac, you can dual boot your machine and choose which operating system you want to use on boot-up. This is an option for students who want to get familiar with another operating system, but don't want to sacrifice their only computer to do so. Alternatively, a Linux-based operating system can be ran in a virtual machine.

Please note that there is more software available at https://portal.azure.com that is only available to School of Computer Science and Digital Media students.

Business Software

- Microsoft Office http://portal.office365.com
  Microsoft Office is available for free for all School of Computer Science and Digital Media students. This will install the full Office package, which includes OneDrive, Word, Excel, PowerPoint, OneNote and Teams.

- Open Office https://www.openoffice.org/
  Open Office is a free alternative to Microsoft Office. This is available to everyone for free. Open Office includes Writer (Word), Calc (Excel), Impress (PowerPoint), Draw (for drawing diagrams), Base (a database tool) and Math (an equation editor). Open Office is fully compatible with other office programs.

- Google https://www.google.com/docs/about/
  Google provides an in-browser document editor. It is free to use for personal use. You will need a Google account to use the software. Google includes Docs (Word), Sheets (Excel), Slides (PowerPoint) and Forms. With Google, you can also collaborate on documents with other people at the same time.

Web Browsers

Operating systems come with a default internet browser. For Windows, this is Edge. For MacOS, this is Safari. Here are some alternatives to the default browsers.

- Firefox https://www.mozilla.org/en-GB/firefox/new/
- Google Chrome https://www.google.co.uk/chrome/

Plugins

You can install plugins for your web browsers. This can enable your browser with additional functionality. Here are a few useful ones to have on any web browser.

- Ad Block Plus (ABP)
  This is a useful plugin to have as it will block most annoying ads from commonly used websites. Some websites can detect this plugin and block you from accessing their site unless it is disabled. This can be done easily by clicking the icon that appears in the top-right of your browser and setting the switch to off.

- Dark Mode
  Some browsers do not come with a dark mode built in. This means that you need to download a separate plugin to enable your browser to display webpages in dark mode.

Protecting Your PC

Windows Defender is included with Windows 10, which is a fairly reliable antivirus. Modern internet browsers will warn users of known harmful or risky websites to visit. Other free antivirus programs are:

- Avast https://www.avast.com/en-gb/index

- Malwarebytes https://www.malwarebytes.com/mwb-download/

Remember to always update your operating system with the latest security patches.

Graphics Editors

2D Animation Programs

- OpenToonz https://morevnaproject.org/opentoonz/
  Free and open-source 2D animation software for Windows, Linux and OSX. OpenToonz is based on software "Toonz" which was developed by Digital Video S.p.A. in Italy, customized by Studio Ghibli, and has been used for creating its works for many years.

- Pencil2D https://www.pencil2d.org/
  An easy, intuitive tool to make 2D hand-drawn animations.

- Synfig Studio https://www.synfig.org/
  Open-source 2D Animation Software for Windows, Linux and OSX

3D Modelling Programs

- Blender https://www.blender.org/download/
  Blender can be used for both 3D animation and modelling.

- TinkerCAD https://www.tinkercad.com/
  TinkerCAD is a free in-browser 3D modelling tool made by Autodesk. To use it, you need to make an account. It has a number of tutorials to teach the basics of 3D modelling if you are new to it.

- Bforartists https://www.bforartists.de/
  The 3D suite Bforartists offers the full art pipeline to create your 3D graphics. From modeling, sculpting, texturing, rigging, animation, rendering up to post processing.

Image Editors

- GIMP https://www.gimp.org/downloads/
  GIMP stands for GNU Image Manipulation Program. This can be used for editing and drawing images.

- Paint.NET https://www.getpaint.net/
  Paint.NET is only available for Windows. It is an image and photo editing software that is free to download.

GUI Prototyping Tool

- Pencil Project https://pencil.evolus.vn/
  An open-source GUI prototyping tool that's available for *ALL* platforms.

  Pencil is built for the purpose of providing a free and open-source GUI prototyping tool that people can easily install and use to create mockups in popular desktop platforms.

Software Development

Programming Languages

- Java https://openjdk.java.net/install/
  With changes to the license, Oracle's version of Java is no longer free. A free alternative does exist, with openJDK.

- Python https://www.python.org/downloads/
  Python is a free and open source programming language.

- Netbeans https://netbeans.apache.org
  Netbeans is an IDE (Intergrated Development Environment) for Java. This is what the School of Computing and Digital Media use when programming in Java.

- Eclipse https://www.eclipse.org/downloads/
  Eclipse is another IDE for Java and a Python plugin is available.

- PyCharm https://www.jetbrains.com/pycharm/
  A Python IDE by JetBrains.

- Notepad++ https://notepad-plus-plus.org/download/v7.7.html
  This is a text editor that lets you write in multiple programming languages, however it does not have a compiler. This is useful for coding HTML web pages and CSS stylesheets.

File Compression

- 7-zip https://www.7-zip.org/download.html

Databases

- MySQL https://www.mysql.com/downloads/

- MongoDB https://www.mongodb.com/download-center
  This link will take you to MongoDB's website where you can host a 500MB server for free in the cloud. You can download a local version of MongoDB and run it locally through the command line. To install a local MongoDB, follow the instructions here. https://docs.mongodb.com/v3.2/tutorial/install-mongodb-on-windows/

Cloud Storage

- Github https://github.com/
  A place for backing up or hosting code straight from your IDE. A single private repository is available for free, meaning only you can see and download the code. The rest of the repositories you create are public, meaning others can see and download your code. If you are uploading anything that contains passwords, personal information, or API keys, remember to delete this beforehand. You can purchase more private repositories if needed.

- Dropbox https://www.dropbox.com/?landing=dbv2
  A way of backing up and sharing files in the cloud. The basic free plan is 2GB of storage, however, more storage can be purchased.

- Google Drive https://www.google.com/drive/
  A way of backing up and sharing files in the cloud. All users get 15GB of storage. More storage can be purchased if needed.

- OneDrive https://onedrive.live.com/about/en-us/
  This is included in the Office 365 download, but it can be downloaded separately. All RGU students get 1TB of space for free, however there is a file size upload limit. Single files can be no larger than 15GB.

Useful Websites

- Ninite https://ninite.com/
  Ninite is a website that allows you to choose what software you want to install, packages them up, and installs them all at once. This is handy if you have a new computer and want a one-stop-shop for commonly used applications and browsers. All the software on this site is free.

- Linus Tech Tips https://www.youtube.com/user/LinusTechTips
  This is a YouTube channel with the latest news from the world of tech.

- Linux https://www.linux.org/
  For bug reports, issues and more regarding Linux installations.

- Major Geeks https://www.majorgeeks.com/

School Facilities

The School of Computer Science and Digital Media has various computer systems that are under the supervision of the school's Systems Support team. The support team manage the computer labs within the School of Computing.

The school has excellent computer facilities with several labs available for School of Computing students to use during the building's opening times. This is usually from 8AM to 10:30PM.

There is a 3 year replacement cycle for lab machines (excluding Apple Macs).

Our windows machines have 21" screens. Our current specification is:

- HP EliteDesk 800
- Windows 10
- ~3.5GHz Intel core i5 processor
- 8GB RAM
- 250GB SSD
- Intel UHD Graphics 630
- 1 front USB C port
- 2 front USB ports
- 1 front headset port
- 2 rear Display ports
- 4 rear USB ports
- 1 rear HDMI port
- 1 Ethernet port

Some of our windows machines have a different specification. For example, our cyber security labs have three separate network cards for each virtual machine.

Our Apple Macs (late 2015 model) have 21.5" screens. The current specification is:

- Mojave 10.14.5
- 2.8GHz Intel core i5 processor
- 8GB DDR3 RAM
- 1TB SSHD
- Intel iris Pro 6200 1536MB Graphics Card
- 4 USB ports
- 2 Thunderbolt ports
- 1 Ethernet port
- Headset port
- SD Card reader

All Apple Macs have been dual booted with Windows 10.

Software

This is the software we currently have installed on our Windows 10 machines.

- 3DS Max 7-zip Android Studio
- Anaconda Arduino Adobe Suite
- Audacity Captura Chrome
- Dreamweaver Eclipse Filezilla
- Firefox Flash player Lego Mindstorms
- Maya Microsoft Office
- Motion builder Mudbox MySQL Client
- Netbeans Neo4j Notepad++
- Packet Tracer Power BI Processing PuTTY
- R Studio Rapid Miner SQL Management Studio
- Tableau Unity Visual Studio

This is the software we currently have installed on the Apple Macs (late 2015).

- Photoshop Illustrator After Effects
- Audition Unity MS Office
- Harmony Processing Audacity
- Maya Mudbox Lego Mindstorms

All the Apple Macs are dual booted with Windows 10, and includes the previously mentioned software list for the Windows 10 machines.

Contact Details

We are open from 8AM to 6PM in Room N425 during the week.

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