

3.2 Software

Introduction

The **software** topic deals with the software associated with a typical computer system. ITGS students are required to understand the meaning of the terms and concepts listed here and, where appropriate, briefly describe how they work or their relevance to the user.

The development of software can have social impacts such as increased access for disabled people, and ethical issues, for example, only producing packages in a limited number of languages, effectively making English the global language. Students are expected to examine the effects of these developments on stakeholders.

Possible scenario

A computer user is planning to update the software on their current computer system to the most recent versions and must use their knowledge to:

- select a suitable operating system based on information such as price and ease of installation
- select suitable software for the computer and decide which source to obtain the software from
- ensure that the software is installed legally, is registered and that user support is available
- select the appropriate software to prevent viruses or malicious software from damaging the contents of the home computer.

IT concepts to address in this topic

Fundamentals

- **Applications:** word processing, desktop publishing, presentations, photo and video editing, music and sound development, website development
- **System software:** operating systems and utilities
- **Interfaces:** graphical user interface (GUI), command line interface (CLI), menu-driven interface (MDI), voice
- **Licensing:** shareware, public domain, freeware, proprietary and open source software
- **Licensing authorities:** Business Software Alliance (BSA)
- Commercial and custom-built (bespoke) software
- Registration, serial number, warranty, copyright agreement
- Web-based software (cloud)
- **User support:** manuals, assistants, tutorials, help systems, “Read Me” files
- Macros, templates, wizards
- **File formats:** for example, RTF (rich text format), TXT (text), PDF (portable document format), XLS (Excel spreadsheet), SWF (small web format), ZIP (zipped file), JPG/JPEG (Joint Photographic Experts Group bitmap), PNG (portable network graphics bitmap), CSV (comma-separated values), HTM/HTML (hypertext markup language)
- **Data transfer:** ASCII (American Standard Code for Information Interchange), tab-delimited text file, zipped file

System utilities

- Defragmentation/optimization and disk utility software
- Backup, file management, account and accessibility management
- Monitor and keyboard settings, for example, international settings, disability settings
- Virus scan, malware detectors and removers
- Compression/decompression (lossless, lossy)
- Color synchronization