### Software

A computer system cannot function without appropriate software. Firstly, operating system software, which allows the user to communicate with the computer, is required. Secondly, utility software, which assists with the day-to-day maintenance of the computer system, for example defragmentationand utility software, is also required. Finally, application software is needed and the type used will depend on the needs of the business. The following table gives some examples of software with examples of their features and purposes.

#### Operating systems

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| Software | Typical features | Purpose |
| Windows |  WIMP-based system   Uses expanded memory   Deals with error messages and user instructions   Opens and closes programs   Controls hardware | To provide a user interface for a Windows-based system. |
| OS X |  Used on a Mac   Supports various languages such as Catalan, Croatian, Greek, Hebrew, etc.   Multi-touch gestures   Can have multiple, full-sized screens open at the same time   Can open files at the exact same place that you closed down   Automatic saving | Provides an interface for a Windows-based system. |
| Android |  The screen layout can be adapted to suit traditional layouts   Most applications are written in Java   It supports pressure sensors, certain gaming control and touch screens, etc. | Linux-based operating system that can be used on mobile devices such as smartphones. |
| iOS |  This interface uses buttons, sliders and switches   Apps can be grouped into folders by can be created by dragging and dropping one app into another   The home screen displays application icons | Used as Apple’s mobile operating system, e.g. on the iPhone. |

#### Utility Software

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| Computer security |  Scheduling of backups   Can allow Internet backup which means you can access your data anywhere   Can provide email reports which keep you informed about backup issues   Disk checker – finds files that are corrupted   Allows usernames and passwords   Allows access rights to be set on files | To assist in the housekeeping of the computer system such as disk defragmentation, file deletion, system restores, etc. |

#### Application software

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| Software | Typical features | Purpose |
| Word processing |  Text formatting   Text editing   Templates   Mail merge   Incorporation of graphics   Tables, borders, columns   Text wrapping   Macros   Important/exporting   Reviewing and facilities | To create and prepare documents. |
| Desktop publishing |  Similar to a word processor but with added publishing features   Has more layout features   Borders and shading   Has more publishing features in terms of fonts, kerning, etc.   Controls widows and orphans | Production of editorial documents. |
| Spreadsheet |  Can record data   Can search data   Can sort data   Can enter various types of data   Absolute and relative cell referencing   Validation and conditional formatting   Can perform calculations   Can produce graphs and charts   Can print in various formats   Can import/export data   Can use logic functions   Can protect cells   Can edit and manipulate data   Can password-protect files   Can make predictions using the ‘what if’ scenario | To display and process information (usually calculations) in a structured way. |
| Database  management software |  Create records, fields and files   Tables can be linked – relational   Primary keys can be set up   Data can be queried   Data can be sorted   Customised reports can be created   Can password-protect files   Mail-merging facilities   Online forms can be created | To organise data into a form manageable for efficient searching and sorting and report production. |

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| Software | Typical features | Purpose |
| Multimedia software |  Interactive   This allows for the combination of text, graphics, video and audio in a presentation   This makes the information more interesting and more meaningful   Different forms of navigation   Different storage file formats   Allows for different paths through the software | Useful for businesses in the training of their employees. |
| Slideshow software |  Master slides can be produced   Automatic slide timings can be set   Slideshows can be looped   Buttons can be added for manual timings   Slide sizes can be manipulated according to their function   Transition and animation effects | Suitable for audience presentations or in advertising, e.g. banners in shopping centres |
| Photo-editing software |  Allows importation and exportation of photographs into various documents   Can set layers/masks in which photographs can be built up from others   It has a lot of image-editing features such as cropping, etc. | Suitable for the manipulation of images. |
| Video-editing software |  This allows for the editing of videos, e.g. trimming of clips   Images can be imported into the video   Audio can be added   Effects can be added, such as the fading in of frames | Suitable for a marketing business in which times and effects matter. |
| Graphics-manipulation software |  Graphics can be described as pictures or graphs.   Can select and use various components   Allows the use of vector or bitmapped graphics   Has creating and editing tools such as freehand, cropping, etc.   The user is able to select and use specialised enhancement tools such as filters and retouching   Allows the saving of various file formats in the appropriate resolution | Suitable for any business that deals with graphics – from a photo graphics business to the production of model portfolios to web designers. |
| Communication software |  Used to send and receive data   Can add attachments   Can add signatures   Can set auto response messages   Can send to multiple recipients   Contains tools to assist with communications | All businesses require this type of software for social networking, instant messaging, transferring files and emailing clients. |
| Presentation software |  Allows the presentation of data in various formats – digital, visual, print, web, etc.   Allows for different pathways. | All businesses have to present information – from statistics to text to pictures. |

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| Software | Typical features | Purpose |
| Gaming software |  Enhancement tools for sound and video   Creation of sprites   Animation of objects   Allows for different genres   Contains tools for manipulation of various file formats | Used in the gaming industry – children’s games, educational games, adult games, etc. |
| Web-browsing software |  Enables a user to view web pages   Allows the creation of bookmarks   Allows navigation of the web with the back/forward button   Enables the user to organise bookmarks and favourites   The History function allows the user to record the websites visited   Enables the user to refresh a page using the refresh button   Enables the user to input URLs into the address bar   Displays a status bar to inform the user of loading details | To allow the reading of web pages. |
| Apps for portable devices |  These work on any device   They work as you move computers   Files, etc. are not left on a PC   Additional software is not required to run apps   They can be used on removable drives | Suitable for use on a portable device such as a phone. |