Categories of Software Project

To: Williams and Smith Accounting Services
From: Adam Ashton
Date: Friday, 06 January 2006
Re: Categories of Software

Introduction
        In this report I will explain the different types of software that are available, show what their purpose is and their advantages and disadvantages.

Hardware and Software
        Before I start, I will explain the difference between software and hardware as many people mix up these terms.
        Hardware refers to the parts of a computing system that you can actually touch or see. This means things like the monitor, the keyboard and mouse etc. The computer circuit boards, the printer and all the disc drives are part of the hardware of the system. All these are the things that are manufactured and assembled in a factory.
        The software of the system means the program's which have to be written by a computer programmer. These things may well be stored inside the computer, perhaps in magnetic form on a hard disc. You cannot actually see the software; it is stored in coded form, as a series of '1's and '0's which only the computer can understand.

Systems and Application Software
        Software can be separated into two different types of software, Systems software and Applications software.
        Systems software is a special type of software that helps the computer function or enable the computer and user of the computer interact. It does not necessarily need to used by and end-user, they mostly run 'in the background' without the user knowing, these include anti-virus software and communications software.
        Application software (sometimes called end-user programs), these run on top of the systems software, they are designed to be used by an end-user, and these include such things as games, word processing software and web browsers.

Systems Software
        There are 5 different types of systems software; I will explain each one below and give examples.

        The Operating System is by far the biggest and most important software for your computer. This piece of software is necessary if you want to use your computer. The main purpose is that it brings the hardware and software together and enables them to work together. Nowadays, they have many more features such as a text editors, clock, and small games. You will probably be most familiar with the operating system Microsoft Windows. It is the most common operating system. There are other operating systems that you could look at, another popular one is Linux, its main advantage is that it's free to download from the internet but operating system lacks desktop applications such as presentation graphical software. There are far too many operating Systems to mention, these are just the two most commonly used operating systems. Whichever operating system you decide to get will determine what applications can run on it. Windows has the most available software to use so I would recommend this operating

system.

Utility programs help manage, maintain and control computer resources. These programs are available to help you with the day-to-day chores associated with personal computing and to keep your system running at peak performance. Some utility programs come together with certain operating system. Some examples of utility programs include:
*   Virus scanning software
*   Backup software
*   Scandisk
*   Disk defragmenter
*   Deleting, renaming and copying of files

Compilers and Interpreters are types of software used to translate the statements from a programming language to machine language. Computers only understand one language, and that is a series of 1's and 0's. It is very difficult to program software in machine language so programming languages that are easier to understand and more like English we're introduced along with interpreters/compilers. Compilers differ from Interpreters in that once a program has been compiled, it is saved in the machine language and then that file can be run over and over without needing to be compiled again. Interpreters do the same job however; it does not save the file in its compiled format – if it ever needs to be run again it must be interpreted (compiled) again.

Performance Monitoring Software is used to monitor the computer components such as the processor, Hard Drive and the computers RAM. These programs are useful to use if the computer is malfunctioning. Performance monitoring software is used a lot on servers or mainframe computers to fix any problems before it crashes.

Communications software is a special type of software that controls and passes data from one computer to another. Types are called Point-to-point protocol (PPP) and Serial Line IP (SLIP) these are commonly used with the Internet and network connections.

Applications Software
        Here are three different types of Applications software; below, I will explain each one.

General Purpose Software or Generic Software is used a lot in the day to day running of a business. There are five most commonly used, they are; Word Processing, Spreadsheets, Database management systems, email software and presentation graphical software. A lot of manufacturer's offer software suites, this is bought in one package and contains the 5 main General Purpose Software. This is popular as you don't need to buy the individual software and it costs less.
        An Integrated package incorporates the main general purpose software into one package. When it is installed it is one software package, it still has word processing software and spreadsheets etc. but they have less functionality than the software suite; however, it is quite adequate for most jobs. An example is Microsoft Works – this integrates spreadsheets and word processing.

Specific Applications Software only does a specific job but it is well

suited to the task. Some examples are; payroll packages, these only are used for payroll activities; software for hospital appointments, this is only useful in a hospital – it would be useless in any other business.

If a business wanted a program to do a specific job they could do two things:
One way is to get a programmer or companies that specialize in designing software to make you specific application software. Once the software has been designed and developed it is then sold to your business. This is called Bespoke Software. This is an application or utility that is designed or tailored for a business or person's specific needs. The benefits of this are that it is designed specifically for you, which should help improve efficiency in your business. However, it is expensive.
The Second is to buy the product 'Off the Shelf' this is where the product has already been made and you just buy from a shop ready made. This is cheaper than bespoke software and you can be sure it has been tested by many people but it might not be what you are looking for in a software package.

I hope you found my report on the 'Categories of Software' useful in explaining and choosing the right software for your business. There is, however, far more information on the internet on types of software, especially for operating systems.

Resources used:
'Information and Communication Technology for AS level' by Julian Mott and Anne Leeming.
'A Level Computing' by P.M Heathcote
www.webopedia.com
www.getnetwise.org