**Introduction:**

**Spyware** is software that aims to gather information about a person or organization without their knowledge, that may send such information to another entity without the consumer's consent.

**Routes of Infection:**

Spyware does not necessarily spread in the same way as a virus or worm because infected systems generally do not attempt to transmit or copy the software to other computers., spy gadgets that look like normal devices but turn out to be something else, such as a USB Keylogger. These devices actually are connected to the device as memory units but are capable of recording each stroke made on the keyboard. Some spyware authors infect a system through security holes in the Web browser or in other software. When the user navigates to a Web page controlled by the spyware author, the page contains code which attacks the browser and forces the download and installation of spyware.

**Effects:**

A spyware program rarely operates alone on a computer; an affected machine usually has multiple infections. Users frequently notice unwanted behaviour and degradation of system performance. A spyware can create significant unwanted CPU activity, disk usage, and network traffic. Stability issues, such as applications freezing, failure to boot, and system-wide crashes are also common. Spyware, which interferes with networking software commonly causes difficulty connecting to the Internet. Moreover, some types of spyware disable software firewalls,antivirus software or reduce browser security settings.

**Anti-spyware Programs:**

Many programmers and some commercial firms have released products dedicated to remove or block spyware. Programs such as PC Tools' Spyware Doctor, Lavasoft's  Ad-Aware SE and Patrick Kolla's Spybot-Search and Destroy rapidly gained popularity as tools to remove, and in some cases intercept, spyware programs.

**Security Practices:**

To detect spyware, computer users have found several practices useful in addition to installing anti-spyware programs. Many users have installed a web browser other than Internet-Explorer, such as Mozilla-Firefox or Google-Chrome. Though no browser is completely safe, Internet Explorer was once at a greater risk for spyware infection due to its large user base. Individual users can also install firewalls from a variety of companies.

**Best Anti-Spyware:**

From Microsoft: Windows Defender helps protect your computer against pop-ups, slow performance, and security threats caused by spyware and other unwanted software. Windows Defender features Real-Time Protection, a monitoring system that recommends actions against spyware when it's detected, minimizes interruptions, and helps you stay productive.

**Heuristic technology:**

It is a technique designed for solving a problem more quickly when classic methods are too slow. The most advanced part of behaviour-based heuristic scanning is that it can work against highly randomized viruses, which simpler string scanning-only approaches cannot reliably detect.

Many virus scanners use heuristic rules to detect viruses and other forms of malware. **It is faster and easier to implement than any known exact algorithm. It will usually find good, although not necessary optimum solutions.**

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