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CONTENT

Computer crime

Computer crime (also called cybercrime, e-crime, hi-tech crime and electronic crime) generally refers to criminal activity where a computer or network is the source, tool, target, or place of a crime. These categories are not exclusive and many activities can be characterized as falling in one or more category. Additionally, although the terms "computer crime" and "cybercrime" are more properly restricted to describing criminal activity in which the computer or network is a necessary part of the crime, these terms are also sometimes used to include traditional crimes, such as fraud, theft, blackmail, forgery, and embezzlement, in which computers or networks are used to facilitate the illicit activity. Cyber crime is also a major issue these days in the world as many people are hacking into computer systems.

Types of computer crimes

"Computer crime" can broadly be defined as criminal activity involving an information technology infrastructure, including illegal access (unauthorized access), illegal interception (by technical means of non-public transmissions of computer data to, from or within a computer system), data interference (unauthorized damaging, deletion, deterioration, alteration or suppression of computer data), systems interference (interfering with the functioning of a computer system by inputting, transmitting, damaging, deleting, deteriorating, altering or suppressing computer data), misuse of devices, forgery (ID theft), and electronic fraud.

Criminals may use the Internet for numerous purposes, including:

- *Trading/sharing information (e.g., documents, photographs, movies, sound files, text and graphic files, and software programs).*
- *Concealing their identity.*
- *Assuming another identity (identity theft).*
- *Identifying and gathering information on victims.*
- *Communicating with co-conspirators.*
- *Distributing information or misinformation.*
- *Coordinating meetings, meeting sites, or parcel drops.*

Opera (web browser)

Opera is a *web browser* and *Internet suite* developed by *Opera Software* with over 200 million users worldwide. The browser handles common *Internet*-related tasks such as displaying *web sites*, sending and receiving *e-mail* messages, managing contacts, *chatting* on *IRC*, downloading files via *BitTorrent*, and reading *web feeds*. Opera is offered free of charge for *personal computers* and *mobile phones*.

Opera does not come packaged with any *desktop operating system*. However, it is the most popular desktop browser in some countries, such as *Ukraine*. *Opera Mini*, which is the *most popular mobile web browser* as of May 2011, has been chosen as the default integrated web browser in several *mobile handsets* by their respective manufacturers.

Features include *tabbed browsing*, *page zooming*, *mouse gestures*, and an integrated *download manager*. Its security features include built-in *phishing* and *malware* protection, *SSL/TLS encryption* when browsing *HTTPS* websites, and the ability to easily delete private data such as *HTTP cookies*.

Opera runs on a variety of personal computer *operating systems*, including *Microsoft Windows*, *Mac OS X*, *Linux*, and *FreeBSD*. Editions of Opera are available for devices using the *Maemo*, *BlackBerry*, *Symbian*, *Windows Mobile*, *Android*, and *iOS* operating systems, as well as *Java ME*-enabled devices. Approximately 120 million mobile phones have been shipped with Opera.[Opera is the only commercial web browser available for the *Nintendo DS* and *Wii* gaming systems. Some television *set-top boxes* use Opera. *Adobe Systems* has licensed Opera technology for use in the *Adobe Creative Suite*.

COMPUTER MULTITASKING

While a computer may be viewed as running one gigantic program stored in its main memory, in some systems it is necessary to give the appearance of running several programs simultaneously. This is achieved by multitasking i.e. having the computer switch rapidly between running each program in turn.

One means by which this is done is with a special signal called an <u>interrupt</u>, which can periodically cause the computer to stop executing instructions where it was and do something else instead. By remembering where it was executing prior to the interrupt, the computer can return to that task later. If several programs are running "at the same time", then the interrupt generator might be causing several hundred interrupts per second, causing a program switch each time. Since modern computers typically execute instructions several orders of magnitude faster than human perception, it may appear that many programs are running at the same time even though only one is ever executing in any given instant. This method of multitasking is sometimes termed "time-sharing" since each program is allocated a "slice" of time in turn.

Before the era of cheap computers, the principal use for multitasking was to allow many people to share the same computer.

Seemingly, multitasking would cause a computer that is switching between several programs to run more slowly, in direct proportion to the number of programs it is running, but most programs spend much of their time waiting for slow input/output devices to complete their tasks. If a program is waiting for the user to click on the mouse or press a key on the keyboard, then it will not take a "time slice" until the event it is waiting for has occurred. This frees up time for other programs to execute so that many programs may be run simultaneously without unacceptable speed loss.

Best Practices for Mobile Applications Developers v beta

Today, CDT and the Future of Privacy Forum publicly released a beta version of their "Best Practices for Mobile Application Developers." We have been working on this guidance over the past year in consultation with stakeholders from industry and civil society, both in the United States and abroad. We hope that this document can serve as a primer for developers who are interested in preserving their customers' privacy but who aren't necessarily privacy experts themselves.

We started on this project because of heightened privacy issues in the mobile environment. Application developers can access a considerably broader range of information about users than traditional web developers. Last year, the Wall Street Journal reported that of the top 101 apps,. Research from the Future of Privacy Forum has shown that even in the most popular applications, less than half have privacy policies detailing what they do with customer data.

The best practices are based on long-established privacy principles that we believe should apply to everyone who collects and processes individual information, not just mobile developers. Among the recommendations that we make to developers are:

- Be completely transparent about how you are using or transmitting customer data
- Don't access more data than you need, and get rid of old data
- Give your customers control over uses that users might not expect
- Use reasonable and up-to-date security protocols to safeguard data
- As the app developer, you need to be responsible for thinking about privacy, and taking privacy into consideration during the various stages of your app life cycle

Google   *Five things to look for in 2012*

Much of the news regarding Google in 2012 will be generated outside the company's Mountain View, Calif., headquarters

It may be a measure of Google's dominance that some of the most important events for the company next year will likely take place in courtrooms and government offices.

The Web giant is under investigation both domestically and abroad for allegedly abusing its powerful position as the leader in Internet search. And rivals are suing Google and its partners as the company expands into markets where they're already competing.

So even as Google works to improve its search engine and bolster emerging businesses such as its Google+ social network, it will be worth keeping tabs on the regulators, lawmakers, and judges who will play a significant role in the company's business going forward.
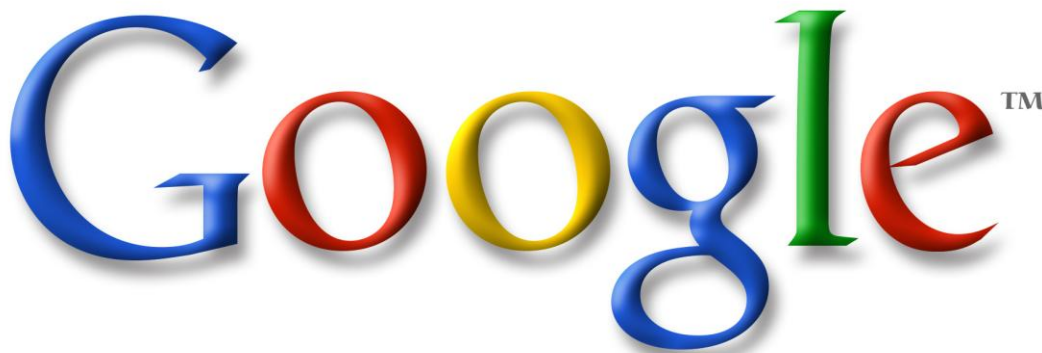
Google™

Antitrust decisions in the U.S. and EU

Regulators both in the United States and abroad are closing in on Google. The Federal Trade Commission began a "formal review" of Google's strategies for building its search business, as well as the tactics it's used to bake search into its Android mobile operating system. The European Commission is investigating whether Google has unfairly manipulated search results by lowering the rankings of competing services and elevating its own offerings in unpaid results.

Facebook adds post privacy settings to iPhone app

In its ongoing effort to fend off competition from—and catch up to—Google+, Facebook on Tuesday launched a revamped version of its iPhone app that makes it easier for users to customize their posts and select their audience.

The updates to the iPhone app mirror Facebook's recent revisions to features on its website, which in turn are similar to some Google+ offerings. As on Google's service, Facebook app users can now select the precise audience for their status updates—the public, just their friends, or other custom-crafted friends lists. Users can also easily designate both their location and accompanying friends in those status posts, a feature that was previously available only in the app's "heck in" feature. And links discovered in Facebook can now easily be reshared via the iPhone app. The app revisions also include a number of bug fixes.

Facebook has been aggressive in countering features offered by Google+ since the rival service launched this summer. In early August, Facebook launched Messenger for Mobile, a separate app apparently designed to compete with Google+'s Huddle functionality. Despite the new rivalry, however, Facebook seems to be holding its own: The site saw 162 million unique visitors in July, according to comScore, an online traffic tracker. That's an 11 percent increase from July 2010.

Students develop BookieMonster software

The students now have a working prototype and are setting up trials in local schools. Ultimately they hope to see their software distributed via existing initiatives in developing nations where literacy in some places is as low as 50 percent. SYDNEY, AUSTRALIA: Computer science students have come up with an innovative way to help children learn to read -- a software that acts as a virtual reading coach.

Ashley Steel, Luke Bjerring and Andre Meister of Waikato University worked with a curriculum coordinator in Switzerland and primary teachers in New Zealand to develop software, called BookieMonster, which acts as a reading coach.

The software computerises a proven method of learning tuition, dubbed "repeated reading" using computer-generated voices and speech recognition.

Children using the software listen to a text being read aloud by the computer, following the words as they are progressively highlighted on-screen in time with the voice, similar to karaoke, according to a Waikato statement.

After hearing a text read to them a few times, they then read it back to the computer via a microphone. The software recognises their speech and provides the same progressive text highlighting what they received while being read to.
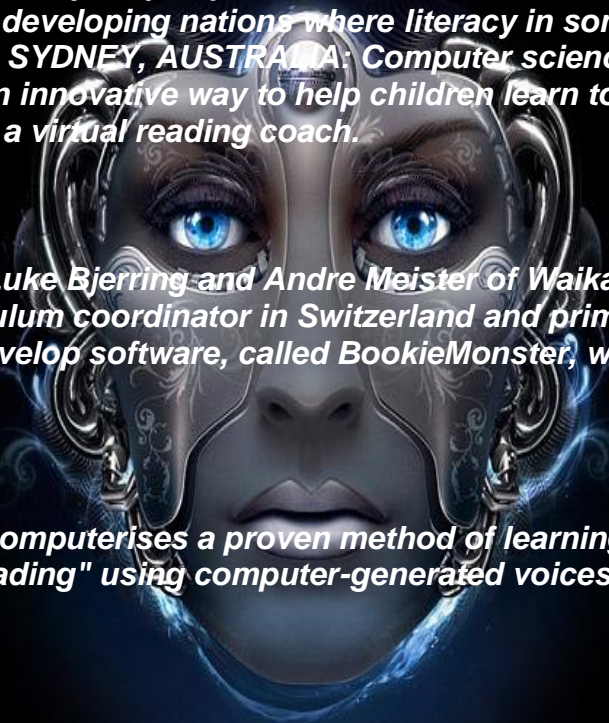
Microsoft warns on IE browser bug

Microsoft's workaround for the IE bug will not protect all users of its web browser.

Microsoft has issued a warning about a serious vulnerability in all versions of its Internet Explorer (IE) browser.

If exploited by a booby-trapped webpage the bug would allow attackers to take control of an unprotected computer.

Code to exploit the bug has already been published though Microsoft said it had no evidence it was currently being used by hi-tech criminals.

A workaround for the bug has been produced while Microsoft works on a permanent fix.

Code injection

The bug revolves around the way that IE manages a computer's memory when processing Cascading Style Sheets - a widely used technology that defines the look and feel of pages on a website.

Hi-tech criminals have long known that they can exploit IE's memory management to inject their own malicious code into the stream of instructions a computer processes as a browser is being used. In this way the criminals can get their own code running and hijack a PC.

Microsoft has produced updates that improve memory management but security researchers discovered that these protection systems are not used when some older parts of Windows are called upon.

In a statement Microsoft said it was "investigating" the bug and working on a permanent fix. In the meantime it recommended those concerned use a protection system known as the Enhanced Mitigation Experience Toolkit.

Adobe Photoshop Express Public Beta Available

Adobe launched Adobe Photoshop Express for pulic beta-testing, a free Internet version is now available to everyone who wants to process digital photographs. Adobe is going to gather and analyze the feedback that Photoshop Express users will provide during the beta-testing period. The company claims that this will help further enhance the product's functionality.

The latest addition to Photoshop Express is based on the Adobe's most efficient image editing technologies which makes it easy to use even online. Photoshop Express allows for free online storing of up to 2 gigabytes of images, editing and sharing, downloading and uploading them online. No previous experience is needed to use special effects feature that is designed with one-click approach.

Photoshop Express contains such tricks as Pop Color which enables users to select a particular object in the image muting the background colors and swapping it to kind of jump out of the page.

Sketch effects make photos resemble drawings and the Distort effects allow for easy distortion of faces or other objects in the image to achieve an artistic or humorous effect. Even those who have limited photo editing skills can easily see which of the sample photos appeals to them most.

Adobe Photoshop CS3 and Photoshop CS3 Extended belong to the Photoshop product line, designed for users who want to get the best out of their digital images.

Windows 7: You Can Disable Every Major Feature

According to an update on the Windows 7 Engineering site on MSDN, users will be allowed to <u>disable almost every major feature</u> that ships with the operating system--yes, including Internet Explorer 8.

Microsoft noted that due to all the anti-trust dealings, <u>user feedback</u>, and browser-OS integration controversies, it has decided to allow users to turn off almost everything, except the core OS itself. The post listed that a new feature, called Windows Features, will be available on the next major build of Windows 7, and will allow a number of things to be turned off. Some major applications among the long list of features that you can disable are:

- All Windows games
- Internet Explorer 8
- Indexing services
- .NET framework
- Windows DVD Maker
- Windows Media Player

Despite the tool, users will not be able to configure much of Windows 7 during the installation and setup process. Even though it received a great deal of feedback to allow options to be configured during setup, Microsoft felt that in order to reduce the complexity of getting Windows up and running, the disabling feature will only be available after installation is complete. Despite this, features that are turned off, will not be accessible, but re-enabling them will also not require original installation disc.

According to the post:

"If a feature is deselected, it is not available for use. This means the files (binaries and data) are not loaded by the operating system (for security-conscious customers) and not available to users on the computer. These same files are staged so that the features can easily be added back to the running OS without additional media. This staging is important feedback we have received from customers who definitely do not like to dig up the installation DVD."
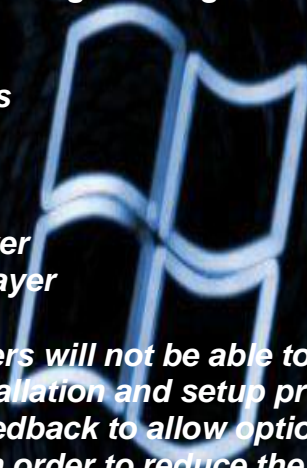
Internet Protocol

The Internet Protocol (IP) is the principal communications protocol used for relaying data grams (packets) across an internetwork using the Internet Protocol Suite. Responsible for routing packets across network boundaries, it is the primary protocol that establishes the Internet.

IP is the primary protocol in the Internet Layer of the Internet Protocol Suite and has the task of delivering data grams from the source host to the destination host solely based on their addresses. For this purpose, IP defines addressing methods and structures for datagram encapsulation.

Historically, IP was the connectionless datagram service in the original Transmission Control Program introduced by Vint Cerf and Bob Kahn in 1974, the other being the connection-oriented Transmission Control Protocol (TCP). The Internet Protocol Suite is therefore often referred to as TCP/IP.

The first major version of IP, now referred to as Internet Protocol Version 4 (IPv4) is the dominant protocol of the Internet, although the successor, Internet Protocol Version 6 (IPv6) is in active, growing deployment worldwide

Services provided

The Internet Protocol is responsible for addressing hosts and routing data grams (packets) from a source host to the destination host across one or more IP networks. For this purpose the Internet Protocol defines an addressing system that has two functions. Addresses identify hosts and provide a logical location service. Each packet is tagged with a header that contains the meta-data for the purpose of delivery. This process of tagging is also called encapsulation.

IP addressing and routing

Perhaps the most complex aspects of IP are IP addressing and routing. Addressing refers to how end hosts become assigned IP addresses and how sub networks of IP host addresses are divided and grouped together. IP routing is performed by all hosts, but most importantly by internetwork routers, which typically use either interior gateway protocols (IGPs) or external gateway protocols (EGPs) to help make IP datagram forwarding decisions across IP connected networks.

Oracle making Java, Solaris certifications pricier

Oracle will soon require 'hands-on' training courses to be taken before certification is granted

Later this year, Oracle will begin requiring people interested in gaining Java and Solaris certifications to attend "hands-on" training courses, at an additional cost of thousands of dollars. The new rule goes into effect Aug. 1 and regards Java Architect, Java Developer, Solaris System Administrator and Solaris Security Administrator certification paths, according to a notice on Oracle's website.

IT professionals can still get certified under existing requirements for those technologies through July 31, the site states. It was not clear when the notice was first posted; Oracle did not immediately respond to a request for comment Tuesday.

The Web page provides a list of approved, instructor-led training courses, some of which are conducted in-person and others online.

"Self Study CD-Rom and Knowledge Center (including Recorded Web Courses -- RWC) courses are excellent study and reference tools but DO NOT meet the Hands-on Course Requirement for certification," it adds.

In general, the courses listed last between three and five days and cost from about US$2,000 to nearly $4,000, according to prices listed on Oracle's site.

They must be taken through Oracle University Training Center; Oracle Authorized Education Center or Oracle Authorized Education Partner; Oracle Academy and approved programs; and Oracle Workforce Development Program.
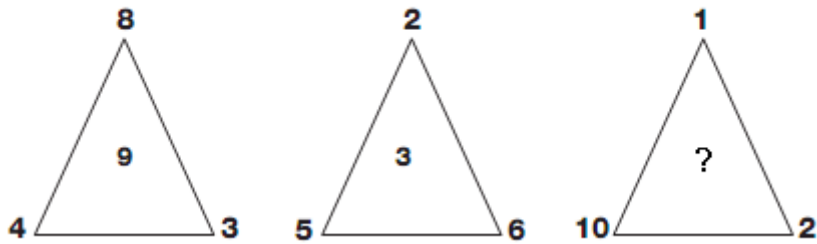
It does not matter how much experience a person has with Java or Solaris; certification will still be made to meet the training requirements, according to the site.

Currently certified individuals will not have to re-certify under the new rules, Oracle said.
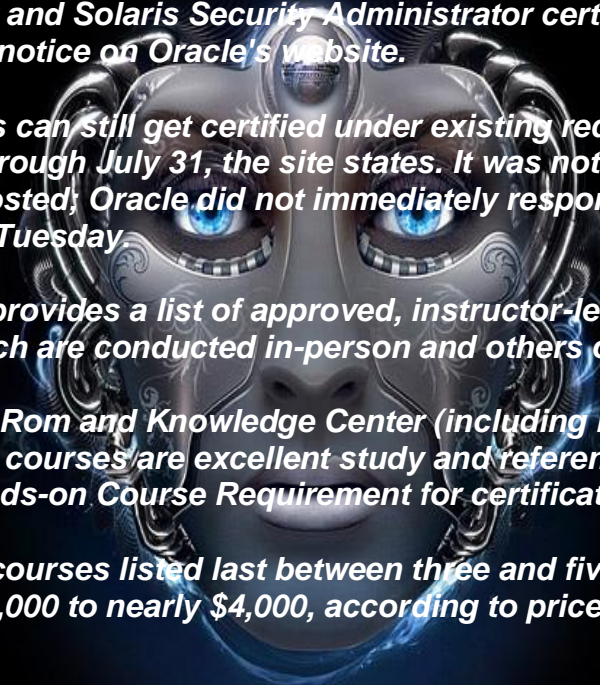
PUZZLES

Which number replaces the question mark?

```
      8              2              1
     /\            /\            /\
    /  \          /  \          /  \
   / 9  \        / 3  \        / ?  \
  /_____\      /_____\      /_____\
 4        3    5        6   10        2
```

Answer   : **11**

Explanation : In each triangle, the central value equals the sum of the 2 even numbers from the outside corners of the triangle minus the odd number.

PUZZLES

Which letter replaces the question mark?

M	E
	I

O	Q
	P

L	D
	H

J	T
	?

Answer : **O**

Explanation : In each group of 3 boxes, the numerical value in the lower box equals the average of the numerical values of the letters in the top 2 boxes.