**1] Types of hackers**

A **Hacker** is a person who is intensely interested in the mysterious workings of any computer operating system. Hackers are most often programmers. They also ensure the protection from the malicious cybercrimes. They work under the rules and regulations provided by the government

**White Hat Hackers:**

* White hat hackers are the one who is authorized or the certified hackers who work for the government and organizations by performing penetration testing and identifying loopholes in their cybersecurity.
* They also ensure the protection from the malicious cybercrimes. They work under the rules and regulations provided by the government.

**Black Hat Hackers:**

* They are often called *Crackers.*
* Black Hat Hackers can gain the unauthorized access of your system and destroy your vital data.
* They are considered to be as criminals and can be easily identified because of their malicious actions.

**Gray Hat Hackers:**

* Gray hat hackers fall somewhere in the category between white hat and black hat hackers.
* They are not legally authorized hackers. They work with both good and bad intentions.

**Script Kiddies:**

* A Script kiddie is an unskilled person who uses scripts or downloads tools available for hacking provided by other hackers.
* Their main purpose is to impress their friends and society. Generally, Script Kiddies are juveniles who are unskilled about hacking.

**Green Hat Hackers:**

* They are also amateurs in the world of hacking but they are bit different from script kiddies.
* They are inspired by the hackers and ask them few questions about. While hackers are answering their question they will listen to its novelty.

**Blue Hat Hackers:**

* They are much like the script kiddies.
* These are beginners in the field of hacking.
* If anyone makes angry a script kiddie and he/she may take revenge, then they are considered as the blue hat hackers. Blue Hat hacker payback to those who have challenged them or angry them.

**Red Hat Hackers:**

* They are also known as the eagle-eyed hackers.
* Red hat hacker will keep on attacking the hacker aggressively that the hacker may know it as well have to replace the whole system.

**State/Nation Sponsored Hackers:**

* State or Nation sponsored hackers are those who are appointed by the government to provide them cybersecurity and to gain confidential information from other countries to stay at the top or to avoid any kind of danger to the country.
* These are highly paid by the organizations.

**Hacktivist:**

* Hacktivist is a hacker or a group of anonymous hackers who gain unauthorized access to government’s computer files and networks for further social or political ends.

**Malicious Insider or Whistleblower:**

* A malicious insider or a whistleblower could be an employee of a company or a government agency with a grudge or a strategic employee who becomes aware of any illegal activities happening within the organization and can blackmail the organization for his/her personal gain.

**2] Viruses that affects Linux**

A **computer virus** is a man-made program that causes unexpected, normally negative, events.

In more technical terms, a computer virus is a type of malicious code or program written to alter the way a computer operates and is designed to spread from one computer to another.

The main source of this virus are games and word processors.

* Linux malware includes **viruses, Trojans, worms** and other types of malware that affect the Linux operating system. Linux, Unix and other Unix-like computer operating systems are generally regarded as very well-protected against, but not immune to, computer viruses.
* Aside from Klez, other major threats affecting Linux/UNIX platforms are the
* **Lion.worm**
* **OSF.8759 virus**
* **Slapper, Scalper**
* **Linux.Svat**
* **BoxPoison virus.**
* Linux.**OSF.8759** is a virus with enhanced backdoor capabilities that replicates on Linux systems and infects ELF executables. The files infected by the virus have their file size increased by 8759 bytes. 3979 bytes belong to the actual virus code while the other 4662 belong to the code of a backdoor attached by the virus at the end of the file.

It was first detected in 2007.

* Slapper is a **network worm** that spreads on Linux machines by using a flaw discovered in August 2002 in OpenSSL libraries. The worm was found in Eastern Europe late on Friday September 2002.

**3] Types of interfaces in java**

An **interface in Java** is a blueprint of a class. It has static constants and abstract methods.

The interface in Java is *a mechanism to achieve* abstraction. There can be only abstract methods in the Java interface, not method body. It is used to achieve abstraction and multiple interface.

In other words, interfaces can have abstract methods and variables. It cannot have a method body.

Syntax:

*interface <interface\_name>*

*{*

*// declare constant fields*

*// declare methods that abstract*

*// by default.*

*}*

**4] use of lambda function in java**

A lambda expression is a short block of code which takes in parameters and returns a value. Lambda expressions are similar to methods, but they do not need a name and they can be implemented right in the body of a method.

Syntax:

*parameter* -> *expression*

To use more than one parameter:

*(parameter1, parameter2)* -> *expression*

**5] What does it mean to use pragma in C?**

The ‘#pragma’ directive is the method specified by the C standard for providing additional information to the compiler, beyond what is conveyed in the language itself. The forms of this directive (commonly known as pragmas) specified by C standard are prefixed with STDC. A C compiler is free to attach any meaning it likes to other pragmas.