**1.) Difference Between Grey, White, Black, Red**

**White hat hacker -**

* It is an ethical computer hacker or a computer security expert who is specialized in penetration testing
* It ensures the security of an organization’s information system.
* White hat hacker also works in the team called sneakers or hackers club

**Black hat hacker -**

* A black hat hacker is a hacker who violates computer security for their own personal profit
* Black hat hacker is an illegal hacking group
* Unlike white hat hacker, black hat hacker does not have any common standardized code or internal regulation

**Grey hat hacker-**

* Grey hat hacker act as blend of both white hat hacker and black hat hacker.
* Grey hat hacker looks for the vulnerabilities in a system without owner permission.
* Grey hat hacker's real intension is to show off their skill and gain publicity.

**Red hat hacker -**

* Red hat hacker could refer to someone who target Linux operating system.
* Red hat hacker launches aggressive attack against the user to bring their system down.

**2.) Different types of attacks**

Types of attacks-

1. Active attack
2. Passive attack

* **Active attack** - Active attack is the type of attack in which the attacker tries to change the content or information. Due to this attack system get damaged and information can be altered. The prevention of this attack is difficult due to their high range of physical and software vulnerability. The damage that is done with this attack can be harmful to the system and resources. Good thing about this attack is that the victims know about the attack.
* For e.g.- Modification of message
* **Passive attack-** Passive attack is a network attack in which a system is monitored and sometimes scanned for open ports and vulnerabilities. The purpose of passive attack is to gain information about the system being targeted. It does not involve any direct action on the target.
* For e.g.- Traffic analysis

**3.) What is the use of Lamda function?**

* Lambda is also known as anonymous functions, are small, restricted functions which do not need a name.
* It is declared with lambda keyword.
* It is used to create anonymous function.
* It can have any numbers of parameters, but the function body should only contain one.
* We call the function and print the returned value.

**4.) What is an interface in java?**

The interface in Java can be defined as the blueprint of the class. An interface can have abstract methods and static constants. By using the interface, we can achieve abstraction in java. We can also achieve multiple inheritance in java using interface. We cannot define the method body in the interface.

Reason if using interface in java are -

* We can achieve multiple inheritance by using interface.
* We can achieve abstraction by using interface.
* Interface, in java, is also used to achieve loose coupling.

**5.) What is the use of #pragma keyword?**

* #pragma can be used to ignore compiler warnings
* Putting #pragma once at the top of your header file will ensure that it is only included once.
* It helps us to specify the functions that are needed to run before program starts.
* Syntax-

#pragma token-string