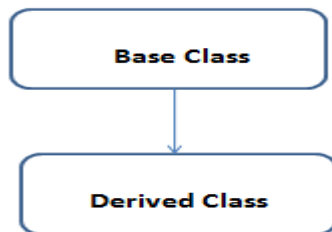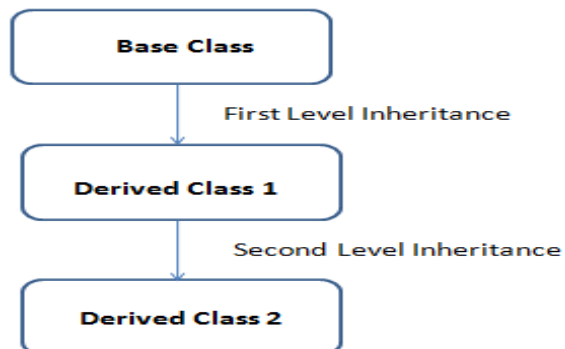# Session 6

- **How to block any website from the server?**

  1. Open your web browser and type in the IP address of your router. This can usually be found on a sticker on the back of your router.

  2. Log in to your router's settings.

  3. Find the website blocking tool in your router's settings.

  4. Enter the websites that you want to block.

  5. Save your changes and restart your router.

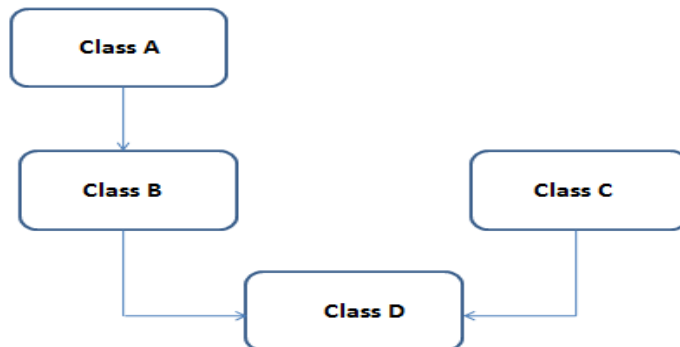- **all types of inheritance and when to use each type**
    1. Single inheritance

        Base Class

        Derived Class

    2. Multi-leve inheritance

        Base Class

        First Level Inheritance

        Derived Class 1

        Second Level Inheritance

        Derived Class 2

    3. Multi-path inheritance

        Class A

        Class B        Class C

        Class D

4. Multiple inheritance

```
┌──────────┐   ┌──────────┐
│  Base-1  │   │  Base-2  │
└────┬─────┘   └────┬─────┘
     └───────┬──────┘
         ┌───▼──────┐
         │ Derived  │
         └──────────┘
```

5. Hybrid inheritance

```
            ┌──────────┐
            │ Class A  │
            └────┬─────┘
       ┌─────────┴─────────┐
  ┌────▼────┐         ┌────▼────┐
  │ Class B │         │ Class C │
  └────┬────┘         └────┬────┘
       └────┐   ┌──────────┘
        ┌───▼───▼───┐
        │  Class D  │
        └───────────┘
```
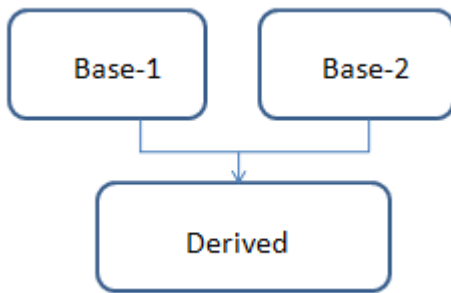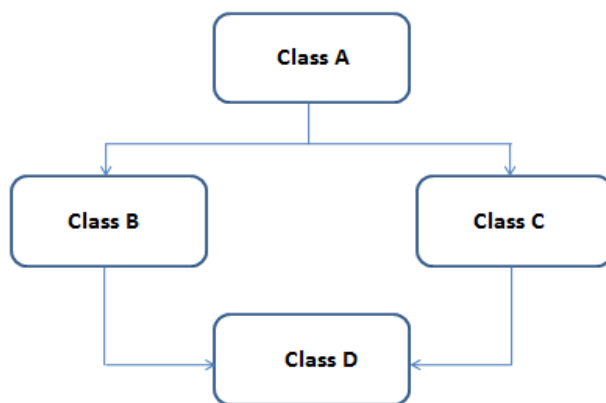
6. Hierarchical inheritance

```
              ┌────────────┐
              │ Base Class │
              └─────┬──────┘
       ┌────────────┼────────────┐
┌──────▼──────┐┌────▼────────┐┌───▼─────────┐
│Derived Class│Derived Class │Derived Class │
│      1      ││      2      ││      3      │
└─────────────┘└─────────────┘└─────────────┘
```
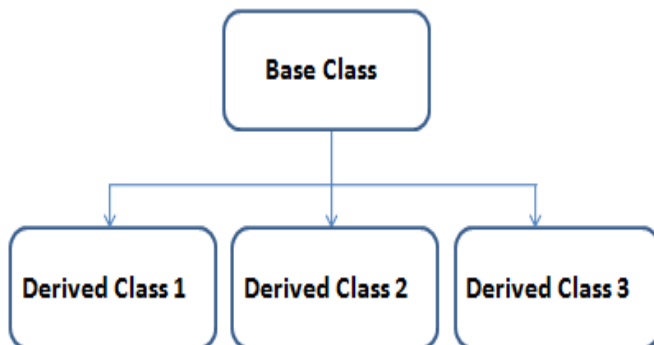
- **How to pass a function as a parameter to another function in C++?**

  #include <functional>

  #include <iostream>

  using namespace std;

```cpp
int add(int x, int y){
 return x + y; }
int multiply(int x, int y) {
 return x * y; }
int invoke(int x, int y,
  function<int(int, int)> func) {
 return func(x, y); }
int main() {
cout << "Addition of 20 and 10 is ";
 cout << invoke(20, 10, &add)
  << '\n';
 cout << "Multiplication of 20"
  << " and 10 is ";
 cout << invoke(20, 10, &multiply)
  << '\n';
 return 0;
}
```

- **how to make the class protected in python**
  by adding a single underscore.
  Example:
  class Student:
      _schoolName = 'XYZ School'