What are Pure Virtual Functions?

- It's a function that is declared within a base class but does not have a implementation in that base class.
- Instead, it is overridden and given a specific implementation by derived (subclass) classes.
- In C++, To declare a pure virtual function use the **'virtual'** keyword in the base class, and append the **'= 0'**
- A class containing the pure virtual function cannot be used to declare the objects of its own, such classes are known as abstract classes.

syntax: virtual void show()=0;

```
#include <iostream>
using namespace std;

class Base {
        int x;

public:
        // pure virtual function
        virtual void fun() = 0;

        int getX()
        { return x; }
};

class Derived : public Base {
        int y;

public:
        void fun()
```

```
        { cout << "fun() called"; }
};

int main(void)
{
        // creating an object of Derived class
        Derived d;
        // calling the fun() function of Derived class
        d.fun();

        return 0;
}
```