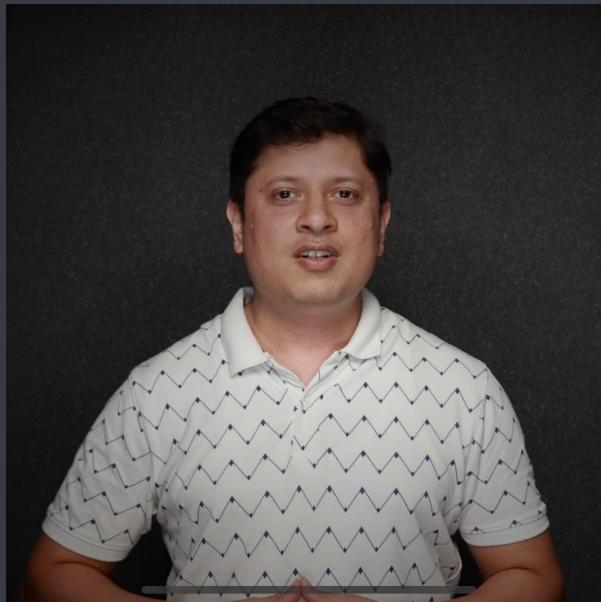


C++ in depth

Abstract class



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Agenda

- ① Pure virtual function
- ② Abstract class
- ③ How to use an abstract class
- ④ virtual destructor

Pure virtual function

A do nothing is called a pure virtual function.

Pure virtual function is also known as an abstract method.

virtual return type function name(args) = 0;

Abstract Class

You cannot create an object of Abstract class.

Abstract class = incomplete class

A class containing at least one pure virtual function, is known as abstract class.

How to use an abstract class?

You cannot create an object of abstract class but you can derive a class from an abstract class.

To use an abstract class, you need to define its child class. Also you have to override pure virtual function of abstract class.

Either you have to override pure virtual function or you have to declare it again as a pure virtual function.

If you declare pure virtual function again in the derived class then the derived class becomes an abstract class.

You can create pointer of an abstract class.

A *P;

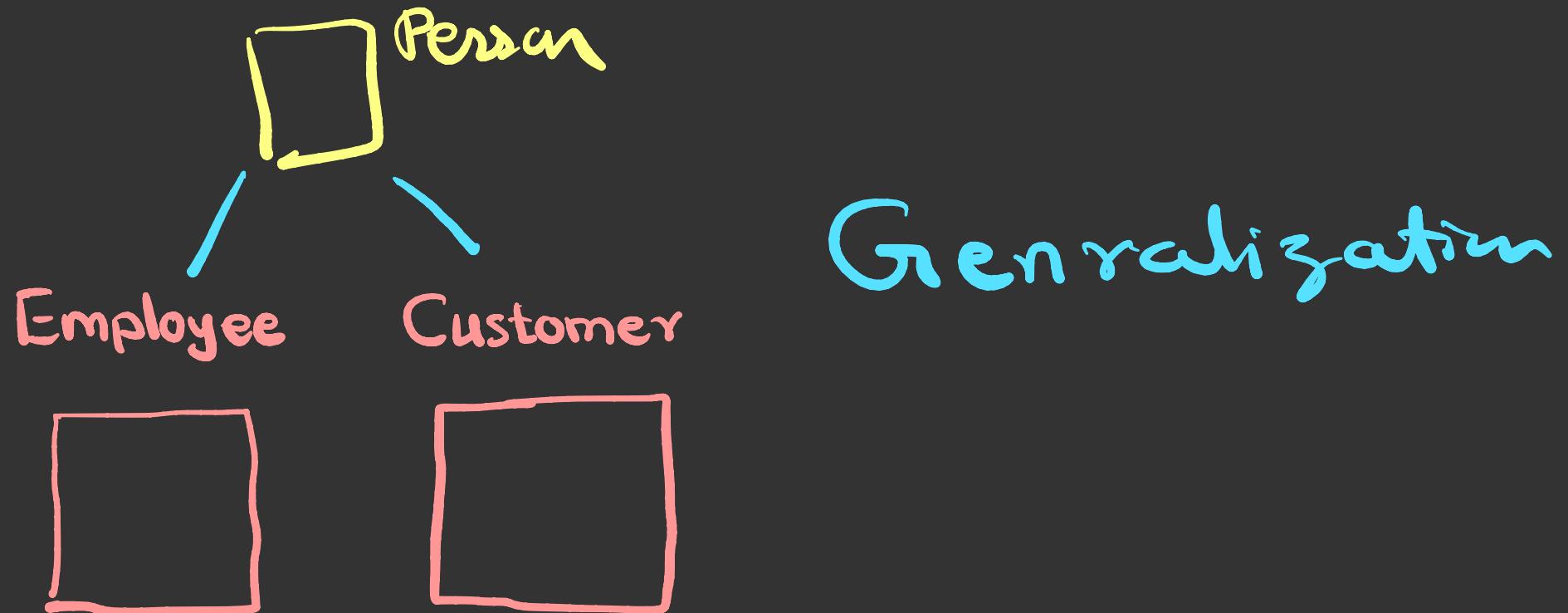
P = new B;

P->f1();

P->f2();

P->f3();

Why Abstract class?



Virtual Destructor

Class A

```
{ public:  
    virtual ~A()  
    { ... }  
};
```

class B : public A

```
{ public:  
    ~B() { ... }  
};
```

int f()

```
{ A *P=new B;
```

...

delete P;

}