*School of Software Engineering*

UNIVERSITYOF SCIENCE AND TECHNOLOGY OF CHINA

**Compilers, Spring 2024**

**Quiz 7: Object-oriented Languages**

Name: Id:

1. (10 points) Given this C++-like code with multiple inheritance:

**class A{**

**vptr**

**vptr**

**k**

**A::a**

**B::b**

**i**

**j**

**C::f**

**C::c**

**C::g'**

**C::g**

**C\_g’(this){**

**this -= 8;**

**C\_g(this);**

**}**

**int i;**

**void a () {}**

**void f () {}**

**}**

**class B{**

**int j;**

**void b () {}**

**void g () {}**

**}**

**class C extends A, B{**

**int k;**

**void c () {}**

**void g () {this.i=0;}**

**void f () {}**

**}**

The object layout for objects created from the

class C is described in the figure at right.

Question: why do we need the thunk code as in the dotted square? What does the line of code "**this-=8**" do?