

CPS235 Object Oriented Programming Paradigm

Quiz 4

BESE15B

26-May-2010

Question 1: Describe the following OOP concepts briefly and show how they are implemented in C++ using a single example (code):

1. Polymorphism
2. Virtual functions and pure virtual functions
3. Abstract classes
4. Function overloading and over-riding
5. Dynamic binding and static binding

Question2: Can a destructor be declared virtual? In what situation, is it necessary to declare a destructor as virtual? What would happen if you don't declare it as virtual?

Question3: What is the following piece of code doing?

```
Base *ptr[10];
for(int i=0;i<10;i++)
    ptr[i] = new Base;
```

where **Base** is a class which has a public member function `void display(){ }`

Explain the errors (if any) in the following statements:

```
ptr->display();
ptr.display();
(*ptr).display();
(*ptr)->display();
ptr[0].display();
ptr[0]->display();
(**ptr).display();
```