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Write a program to implement following class hierarchy:

(Using inheritance, object pointers and virtual functions)

Animal(eat())

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Dog(eat())

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Labrador(eat())

Every class is having eat() method.

Apply concept of run-time polymorphism.

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#include<bits/stdc++.h>

using namespace std;

class Animal{

public:

virtual void eat(){ // The function is virtual to avoid compile time binding

cout<<"Animal is eating now.\n";

}

};

class Dog: public Animal{

public:

virtual void eat(){ // The function is virtual to avoid compile time binding

cout<<"Dog is eating now.\n";

}

};

class Labrador: public Dog{

public:

void eat(){

cout<<"Labrador is eating now.\n";

}

};

int main(){

// Two objects:

// 1. Animal \*obj <- new Dog();

// 2. Dog \*obj <- new Labrador();

// 1.

Animal \*animal = new Dog();

// Calling animal->eat()

animal->eat(); // OUTPUT: Dog is eating now.

// Even though the obj is of type animal, the method from the class Dog is called.

// 2.

Dog \*dog = new Labrador();

// Calling dog->eat()

dog->eat(); // OUTPUT: Labrador is eating now.

// Even though the obj is of type Dog, the method from the class Dog is called.

}

OUTPUT:

Dog is eating now.

Labrador is eating now.