Hw09 inheritance

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2023.05.22 월

# 소스 코드

#include <iostream>  
#include <string>  
  
using namespace std;  
  
class Shape {  
protected:  
 string name; // 도형의 이름  
 int width, height;// 도형이 내접하는 사각형  
public:  
 Shape(string n = "", int w = 0, int h = 0) {  
 name = std::move(n);  
 width = w;  
 height = h;  
 }  
 virtual ~Shape() = default;  
 virtual double getArea() const { return 0; }  
 string getName() const { return name; }// 이름 리턴  
};

class Rect : public Shape {  
public:  
 Rect(string n = "", int w = 0, int h = 0) : Shape(std::move(n), w, h) {}  
 ~Rect() override = default;  
 constexpr double getArea() const override { return width \* height; }  
};

class Oval : public Shape {  
public:  
 Oval(string n = "", int w = 0, int h = 0) : Shape(std::move(n), w, h) {}  
 ~Oval() override = default;  
 constexpr double getArea() const override { return PI \* width \* height; }  
  
private:  
 static constexpr auto PI = 3.14;  
};

class Triangular : public Shape {  
public:  
 Triangular(string n = "", int w = 0, int h = 0) : Shape(std::move(n), w, h) {}  
 ~Triangular() override = default;  
 constexpr double getArea() const override { return width \* height / 2; }  
};

int main() {  
 Shape \*p[3];  
 p[0] = new Oval("빈대떡", 10, 20);  
 p[1] = new Rect("찰떡", 30, 40);  
 p[2] = new Triangular("토스트", 30, 40);  
 for (int i = 0; i < 3; i++)  
 cout << p[i]->getName() << " 넓이는 " << p[i]->getArea() << endl;  
 for (int i = 0; i < 3; i++) delete p[i];  
}

# 실행 결과

