20 ИТК

using System;

class PowerSubsystem

{

public void PowerOn()

{

Console.WriteLine("Powering on the computer...");

}

public void PowerOff()

{

Console.WriteLine("Powering off the computer...");

}

}

class OSSubsystem

{

public void LoadOS()

{

Console.WriteLine("Loading operating system...");

}

public void ShutdownOS()

{

Console.WriteLine("Shutting down operating system...");

}

}

class ProgramSubsystem

{

public void ExecuteProgram(string programName)

{

Console.WriteLine($"Executing program: {programName}...");

}

}

class Computer

{

private PowerSubsystem powerSubsystem = new PowerSubsystem();

private OSSubsystem osSubsystem = new OSSubsystem();

private ProgramSubsystem programSubsystem = new ProgramSubsystem();

public void StartOS()

{

powerSubsystem.PowerOn();

osSubsystem.LoadOS();

}

public void ShutDown()

{

osSubsystem.ShutdownOS();

powerSubsystem.PowerOff();

}

public void RunProgram(string programName)

{

programSubsystem.ExecuteProgram(programName);

}

}

class Program

{

static void Main()

{

Computer computer = new Computer();

computer.StartOS();

computer.RunProgram("Example Program");

computer.ShutDown();

}

}

Проекты по паттернам

using System;

abstract class Property

{

public double Area { get; set; }

public int Residents { get; set; }

public int YearBuilt { get; set; }

public double Depreciation { get; set; }

public abstract double CalculateInsurancePremium(int years);

}

class Apartment : Property

{

public override double CalculateInsurancePremium(int years)

{

return (Area \* 1.5 + Residents \* 0.8) \* (1 - Depreciation / 100) \* years;

}

}

class Townhouse : Property

{

public override double CalculateInsurancePremium(int years)

{

return (Area \* 2.0 + Residents \* 1.0) \* (1 - Depreciation / 100) \* years;

}

}

class Cottage : Property

{

public override double CalculateInsurancePremium(int years)

{

return (Area \* 2.5 + Residents \* 1.2) \* (1 - Depreciation / 100) \* years;

}

}

class InsuranceFacade

{

public double CalculateInsurancePremium(Property property, int years)

{

return property.CalculateInsurancePremium(years);

}

}

class Program

{

static void Main()

{

Property apartment = new Apartment { Area = 60, Residents = 3, YearBuilt = 2010, Depreciation = 10 };

Property townhouse = new Townhouse { Area = 120, Residents = 4, YearBuilt = 2005, Depreciation = 15 };

Property cottage = new Cottage { Area = 200, Residents = 5, YearBuilt = 2000, Depreciation = 20 };

InsuranceFacade facade = new InsuranceFacade();

double apartmentPremium = facade.CalculateInsurancePremium(apartment, 5);

double townhousePremium = facade.CalculateInsurancePremium(townhouse, 5);

double cottagePremium = facade.CalculateInsurancePremium(cottage, 5);

Console.WriteLine($"Apartment Insurance Premium: {apartmentPremium}");

Console.WriteLine($"Townhouse Insurance Premium: {townhousePremium}");

Console.WriteLine($"Cottage Insurance Premium: {cottagePremium}");

}

}