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| --- |
| **AbstractFactory** |
| **Line** | **Code** |
| **1****2****3****4****5****6****7****8****9****10****11****12****13****14****15****16****17****18****19****20****21****22****23****24****25****26****27****28****29****30****31****32****33****34****35****36****37****38****39****40****41****42****43****44****45****46****47****48****49****50****51****52****53****54****55****56****57****58****59****60****61****62****63****64****65****66****67****68****69****70****71****72****73****74****75****76****77****78****79****80****81****82****83****84****85****86** | **using** System;**namespace** AbstractFactory{ **interface** IFactory<Brand> where Brand:IBrand{ IBag CreateBag(); IShoes CreateShoes(); } //Conctete Factories (both in the same one) **class** Factory<Brand>:IFactory<Brand> where Brand:IBrand,**new**(){ **public** IBag CreateBag(){ **return new** Bag<Brand>(); } **public** IShoes CreateShoes(){ **return new** Shoes<Brand>(); } } //Abstract Product 1 **interface** IBag{ **string** Material { get; } } //Abstract Product 2 **interface** IShoes{ **int** Price { get; } } //Concrete Product 1 **class** Bag<Brand>:IBag where Brand : IBrand, **new**(){ **private** Brand myBrand; **public** Bag(){ myBrand = **new** Brand(); } **public string** Material { get { return myBrand.Material; } } } //Concrete Product 2 **class** Shoes<Brand>:IShoes where Brand : IBrand, **new**(){ **private** Brand myBrand; **public** Shoes(){ myBrand = **new** Brand(); } **public int** Price { get { return myBrand.Price; } } } **interface** IBrand{ **int** Price { get; } **string** Material { get; } } **class** Gucci:IBrand{ **public int** Price { get { return 1000; } } **public string** Material { get { return "Crocodile skin"; } } } **class** Poochy:IBrand{ **public int** Price { get { return new Gucci().Price / 3; } } **public string** Material { get { return "Plastic"; } } } **class** Groundcover:IBrand{ **public int** Price { get { return 2000; } } **public string** Material { get { return "South african leather"; } } } **class** Client<Brand> where Brand : IBrand, **new**() { **public void** ClientMain(){ //IFactory<Brand> factory) IFactory<Brand> factory = **new** Factory<Brand>(); IBag bag = factory.CreateBag(); IShoes shoes = factory.CreateShoes(); Console.WriteLine("I bought a Bag which is made from " + bag.Material); Console.WriteLine("I bought some shoes which cost " + shoes.Price); } } **static class** Program{ **static void** Main(){ **new** Client<Poochy>().ClientMain(); **new** Client<Gucci>().ClientMain(); **new** Client<Groundcover>().ClientMain(); } }} |