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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();  }  }  } |