# Factory Method Pattern in C#

This document explains and demonstrates the Factory Method Design Pattern with different document types like Word, PDF, and Excel in C#.

## IDocument.cs

namespace FactoryMethodPatternExample  
{  
 public interface IDocument  
 {  
 void Open();  
 }  
}

## WordDocument.cs

using System;  
  
namespace FactoryMethodPatternExample  
{  
 public class WordDocument : IDocument  
 {  
 public void Open()  
 {  
 Console.WriteLine("Opening Word Document...");  
 }  
 }  
}

## PdfDocument.cs

using System;  
  
namespace FactoryMethodPatternExample  
{  
 public class PdfDocument : IDocument  
 {  
 public void Open()  
 {  
 Console.WriteLine("Opening PDF Document...");  
 }  
 }  
}

## ExcelDocument.cs

using System;  
  
namespace FactoryMethodPatternExample  
{  
 public class ExcelDocument : IDocument  
 {  
 public void Open()  
 {  
 Console.WriteLine("Opening Excel Document...");  
 }  
 }  
}

## DocumentFactory.cs

namespace FactoryMethodPatternExample  
{  
 public abstract class DocumentFactory  
 {  
 public abstract IDocument CreateDocument();  
 }  
}

## WordDocumentFactory.cs

namespace FactoryMethodPatternExample  
{  
 public class WordDocumentFactory : DocumentFactory  
 {  
 public override IDocument CreateDocument()  
 {  
 return new WordDocument();  
 }  
 }  
}

## PdfDocumentFactory.cs

namespace FactoryMethodPatternExample  
{  
 public class PdfDocumentFactory : DocumentFactory  
 {  
 public override IDocument CreateDocument()  
 {  
 return new PdfDocument();  
 }  
 }  
}

## ExcelDocumentFactory.cs

namespace FactoryMethodPatternExample  
{  
 public class ExcelDocumentFactory : DocumentFactory  
 {  
 public override IDocument CreateDocument()  
 {  
 return new ExcelDocument();  
 }  
 }  
}

## Program.cs

using System;  
  
namespace FactoryMethodPatternExample  
{  
 class Program  
 {  
 static void Main(string[] args)  
 {  
 DocumentFactory wordFactory = new WordDocumentFactory();  
 IDocument wordDoc = wordFactory.CreateDocument();  
 wordDoc.Open();  
  
 DocumentFactory pdfFactory = new PdfDocumentFactory();  
 IDocument pdfDoc = pdfFactory.CreateDocument();  
 pdfDoc.Open();  
  
 DocumentFactory excelFactory = new ExcelDocumentFactory();  
 IDocument excelDoc = excelFactory.CreateDocument();  
 excelDoc.Open();  
 }  
 }  
}



