Cheatography

Unity Container Cheat Sheet

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Essential Links

Unity NuGet Package	https://www.nuget.org/packages/Unity/
Unity Registration by Convention NuGet Package	https://www.nuget.org/packages/Unity.RegistrationByConvention/
Overview	https://www.tutorialsteacher.com/ioc/unity-container
GitHub Repo	https://github.com/unitycontainer/unity

Example Code

```
public interface ICar
{
  int Run();
}
public class Car : ICar
{
  private int _miles;
  public int Run()
  {
    return ++_miles;
  }
}
public class Driver
{
  private ICar _car;
  public Driver(ICar car)
  {
    _car = car;
  }
  public void RunCar()
  {
    Console.WriteLine("Running {0} - {1} mile ",
_car.GetType().Name, _car.Run());
  }
}
```

Register and Resolve

```
IUnityContainer container = new UnityContainer();
container.RegisterType<ICar, Car>();
//Resolves dependencies and returns the Driver
Driver driver= container.Resolve<Driver>();
driver.RunCar();
```

Constructor Injection

```
[InjectionConstructor]
public Driver(ICar car)
{
    _car = car;
}
```

Property Injection

```
[Dependency]
public ICar Car { get; set; }
```

Register Types

```
//NuGet Package Unity.RegistrationByConvention
//The interface and class names must match
//ICar and Car
public static void RegisterTypes(IUnityContainer
container)
{
  container.RegisterTypes(
    AllClasses.FromLoadedAssemblies(),
    WithMappings.FromMatchingInterface,
    WithName.Default);
}
```

Register Types In Assembly

```
RegisterTypesInAssembly(container,
typeof(Car).Assembly);
public static void RegisterTypesInAssembly
(IUnityContainer container, Assembly assembly)
{
  IEnumerable<Type> types = assembly.GetTypes()
    .Where(o => o.IsClass
          && !o.IsGenericType
          && !o.IsAbstract
          && o.GetInterfaces().Any());
  foreach (Type type in types)
  {
    container.RegisterType(type.GetInterfaces()
      .First(), type);
  }
}
```


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