//Example of Autowired using Annotations

//JavaProject name : AutowiredAnnotation

//class file name: Capital

```java
package com.springautowired;

public class Capital {
        private String name;

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    @Override
    public String toString() {
        return "Capital [name=" + name + "]";
    }
}


//class file name: Country

package com.springautowired;

import org.springframework.beans.factory.annotation.Autowired;

public class Country {
        private String countryName;

    @Autowired
    private Capital capital;

    public String getCountryName() {
        return countryName;
    }

    public void setCountryName(String countryName) {
        this.countryName = countryName;
    }

    public Capital getCapital() {
        return capital;
    }

    public void setCapital(Capital capital) {
        this.capital = capital;
```

```java
    }

    @Override
    public String toString() {
        return "Country [countryName=" + countryName + ", capital=" +
capital.toString() + "]";
    }
}
```

//class file name:Country2

```java
package com.springautowired;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.beans.factory.annotation.Qualifier;

public class Country2 {
        private String countryName;

    @Autowired
    @Qualifier(value="myCapital2")
    private Capital capital;

    public String getCountryName() {
        return countryName;
    }

    public void setCountryName(String countryName) {
        this.countryName = countryName;
    }

    public Capital getCapital() {
        return capital;
    }

    public void setCapital(Capital capital) {
        this.capital = capital;
    }

    @Override
    public String toString() {
        return "Country [countryName=" + countryName + ", capital=" +
capital.toString() + "]";
    }
}
```

//Main class file: AppMain
//package name:com.spring

```java
package com.spring;
```

```java
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

import com.springautowired.Country;
import com.springautowired.Country2;

public class AppMain {

    private static void autowired(String file) {

        ApplicationContext ac = new ClassPathXmlApplicationContext(file);
        if (file.equalsIgnoreCase("autowired.xml")) {
            Country country = ac.getBean("myCountry", Country.class);
            System.out.println(country.toString());
        } else {
            Country2 country = ac.getBean("myCountry", Country2.class);
            System.out.println(country.toString());
        }
    }

    public static void main(String[] args) {

        int choice = Menu.displayMenu();

        switch (choice) {
        case 1:
            System.out.println("'Autowired annotation' selected");
            autowired("autowired.xml");
            break;
        case 2:
            System.out.println("'Autowired with Qualifier annotation' selected");
            autowired("autowired-qualifier.xml");
            break;
        default:
            System.err.println("Invalid choice.");
        }
    }

}


//class file name:Menu

package com.spring;


public class Menu {

    public static int displayMenu() {
        // TODO Auto-generated method stub
        return 0;
    }
```

```
}
```

//pom.xml file

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.autowired</groupId>
  <artifactId>AutowiredAnnotation</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <dependencies>
      <!-- https://mvnrepository.com/artifact/org.springframework/spring-beans -->
      <dependency>
          <groupId>org.springframework</groupId>
          <artifactId>spring-beans</artifactId>
          <version>5.0.6.RELEASE</version>
      </dependency>
      <!-- https://mvnrepository.com/artifact/org.springframework/spring-context -->
      <dependency>
          <groupId>org.springframework</groupId>
          <artifactId>spring-context</artifactId>
          <version>5.0.6.RELEASE</version>
      </dependency>
  </dependencies>
  <build>
      <finalName>${project.artifactId}</finalName>
  </build>
</project>
```

//autowired.xml file

```xml
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:context="http://www.springframework.org/schema/context"
    xsi:schemaLocation="
       http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
       http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context.xsd">

    <!-- Used to activate the @Autowired annotation in Spring -->
    <context:annotation-config />

    <bean id="myCapital" class="com.springautowired.Capital">
```

```xml
            <property name="name" value="Delhi" />
    </bean>

    <bean id="myCountry" class="com.springautowired.Country">
        <property name="countryName" value="India" />
    </bean>
</beans>
```

///autowired-qualifier.xml file

```xml
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:context="http://www.springframework.org/schema/context"
    xsi:schemaLocation="
        http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context.xsd">

    <!-- Used to activate the @Autowired annotation in Spring -->
    <context:annotation-config />

    <bean id="myCapital1" class="com.springautowired.Capital">
        <property name="name" value="The Hague" />
    </bean>

    <bean id="myCapital2" class="com.springautowired.Capital">
        <property name="name" value="Amsterdam" />
    </bean>

    <bean id="myCountry" class="com.springautowired.Country2">
        <property name="countryName" value="Netherlands" />
    </bean>
</beans>
```

Output: Invalid choice.