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/*
Pro Spring
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*/
```

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////////////////////////////////////
//File: lookup.xml
<!DOCTYPE beans PUBLIC "-//SPRING//DTD BEAN//EN" "http://www.springframework.org/dtd/spring-
beans.dtd">
<beans>
  <bean id="helper" class="MyHelper" singleton="false"/>
  <bean id="abstractLookupBean" class="AbstractLookupDemoBean">
    <lookup-method name="getMyHelper" bean="helper"/>
  </bean>
  <bean id="standardLookupBean" class="StandardLookupDemoBean">
    <property name="myHelper">
      <ref local="helper"/>
    </property>
  </bean>
  <bean id="factoryLookupBean" class="BeanFactoryAwareLookupDemoBean"/>
</beans>
```

```
////////////////////////////////////
public interface DemoBean {

  public MyHelper getMyHelper();
  public void someOperation();
}
```

```
////////////////////////////////////
public class MyHelper {

  public void doSomethingHelpful() {
    // do something!
  }
}
```

```
////////////////////////////////////
public class StandardLookupDemoBean implements DemoBean {

  private MyHelper helper;

  public void setMyHelper(MyHelper helper) {
    this.helper = helper;
  }
}
```

```

    }

    public MyHelper getMyHelper() {
        return this.helper;
    }

    public void someOperation() {
        helper.doSomethingHelpful();
    }
}

////////////////////////////////////
public abstract class AbstractLookupDemoBean implements DemoBean {

    public abstract MyHelper getMyHelper();

    public void someOperation() {
        getMyHelper().doSomethingHelpful();
    }
}

////////////////////////////////////

import org.springframework.beans.BeansException;
import org.springframework.beans.factory.BeanFactory;
import org.springframework.beans.factory.BeanFactoryAware;

public class BeanFactoryAwareLookupDemoBean implements BeanFactoryAware,
    DemoBean {

    private BeanFactory factory = null;

    public void setBeanFactory(BeanFactory factory) throws BeansException {
        this.factory = factory;
    }

    public MyHelper getMyHelper() {
        return (MyHelper) factory.getBean("helper");
    }

    public void someOperation() {
        getMyHelper().doSomethingHelpful();
    }
}

////////////////////////////////////
import org.springframework.beans.factory.BeanFactory;
import org.springframework.beans.factory.xml.XmlBeanFactory;
import org.springframework.core.io.FileSystemResource;
import org.springframework.util.StopWatch;

public class LookupPerformance {

    public static void main(String[] args) {

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BeanFactory factory = new XmlBeanFactory(new FileSystemResource(
    "build/lookup.xml"));

DemoBean abstractBean = (DemoBean) factory.getBean("abstractLookupBean");
DemoBean factoryBean = (DemoBean) factory.getBean("factoryLookupBean");

testPerf(abstractBean);
testPerf(factoryBean);
}

public static void testPerf(DemoBean bean) {
    Stopwatch stopWatch = new Stopwatch();
    stopWatch.start("perfTest");

    for (int x = 0; x < 1000000; x++) {
        MyHelper helper = bean.getMyHelper();
        helper.doSomethingHelpful();
    }

    stopWatch.stop();

    System.out.println("1000000 gets took "
        + stopWatch.getTotalTimeSeconds() + " seconds");
}
}
```