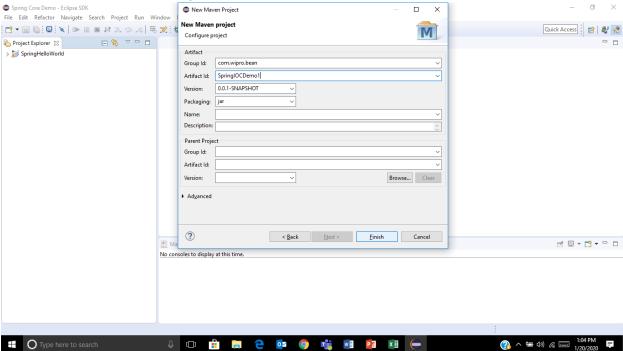
Spring IOC Demo Projects

I. Setter Based DI

a. Let us make a Maven Based Project.



b. Add the dependencies in the POM.xml file

- c. Under src/main/java Create a package called com.wipro.bean
- d. Under the package create 2 classes called
 - i. Address.java
 - ii. Employee.java

Address Class Code:

```
package com.wipro.bean;
public class Address {
    private String street;
```

```
private String pincode;
      public Address() {
             // TODO default constructor stub
      }
      public Address(String street, String city, String pincode) {
             this.street = street;
             this.city = city;
             this.pincode = pincode;
      }
      public String getStreet() {
             return street;
      }
      public void setStreet(String street) {
             this.street = street;
      public String getCity() {
             return city;
      public void setCity(String city) {
             this.city = city;
      }
      public String getPincode() {
             return pincode;
      public void setPincode(String pincode) {
             this.pincode = pincode;
      @Override
      public String toString() {
             return "Address [street=" + street + ", city=" + city + ", pincode=" +
pincode + "]";
      }
}
      Employee Class Code:
      package com.wipro.bean;
      public class Employee {
             private String name;
             private String empId;
             private Address address;
             public Employee() {
                    super();
                    // TODO default constructor stub
             public Employee(String name, String empId, Address address) {
                    super();
                    this.name = name;
                    this.empId = empId;
```

private String city;

```
this.address = address;
      public String getName() {
             return name;
      public void setName(String name) {
             this.name = name;
      public String getEmpId() {
             return empId;
      public void setEmpId(String empId) {
             this.empId = empId;
      public Address getAddress() {
             return address;
      public void setAddress(Address address) {
             this.address = address;
      }
      @Override
      public String toString() {
             return "Employee [name=" + name + ", empId=" + empId + ",
address=" + address + "]";
      }
}
e. Create the beans.xml configuration file under the src/main/resources
   <?xml version="1.0" encoding="UTF-8"?>
   <beans xmlns="http://www.springframework.org/schema/beans"</pre>
     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
```

<bean id="addressBean" class="com.wipro.bean.Address">

http://www.springframework.org/schema/context/spring-context.xsd">

cproperty name="street" value="Pritech Park">cyroperty name="city" value="Bengaluru">cyroperty name="pincode" value="560037">

http://www.springframework.org/schema/context

</bean>

f. Create the UserMain class under src/main/java – package com.wipro.services

```
Spring Core Demo - SpringlOCDemo1/src/main/java/com/wipro/services/UserMain.java - Eclipse SDK
                                                                                                                                                                                                      File Edit Source Refactor Navigate Search Project Run Window Help
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                                                                                                                                                                                       Quick Access
Project Explorer 🛭 📑 😘 ▽ 🗷 🗖 📓 Spring/OCDemo1/pom.xml 📗 Address.java 🔝 Employee.java 🔯 beans.xml 🚇 UserMain.java 🕄
                                          1 package com.wipro.services;
  SpringHelloWorld
      SpringlOCDemo1
                                         38 import org.springframework.context.ApplicationContext;
4 import org.springframework.context.support.ClassPathXmlApplicationContext;
5 import com.wipro.bean.Employee;
    > I Employee.java
                                         8 public class UserMain {
99 public static void main(String[] args) {
     ApplicationContext context = new ClassPathXmlApplicationContext("beans.xml");
Employee employee = context.getBean(Employee.class);
System.out.println(employee);
}
   > # src/test/resources
    > May JRE System Library [J2SE-1.5]
> Mayen Dependencies
    > 😂 src
     target
pom.xml
                                         🔝 Markers 🔲 Properties 🚜 Servers 🏙 Data Source Explorer 🔠 Snippets 🦹 Problems 📮 Console 🕱
                                                                                                                                                             <terminated> UserMain (1) [Java Application] C.\Program Files\Oracle\OpenIDK 11.0.1\bin\javaw.exe (Jan 22, 2020, 11:15:12 AM)
Employee [name=ALLEN, empId=2800123, address=Address [street=Pritech Park, city=Bengaluru, pincode=560037]]
```

II. Constructor Based DI

On to the same application above Let us change the beans.xml and UserMain to see difference in Constructor based DI.

1. Create xml configuration file named beans-consdi.xml under src/main/resources

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"</pre>
  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">
   <bean id="addressBean" class="com.wipro.bean.Address">
          <!-- Using Constructor for passing the values -->
          <constructor-arg index="0" type="java.lang.String" value="Pritech"</pre>
Park"></constructor-arg>
          <constructor-arg index="1" type="java.lang.String"</pre>
value="Bengaluru"></constructor-arg>
          <constructor-arg index="2" type="java.lang.String"</pre>
value="560037"></constructor-arg>
   </bean>
   <bean id="employeeBean" class="com.wipro.bean.Employee">
          <constructor-arg index="0" type="java.lang.String"</pre>
value="ALLEN"></constructor-arg>
          <constructor-arg index="1" type="java.lang.String"</pre>
value="2000123"></constructor-arg>
          <constructor-arg index="2" type="com.wipro.bean.Address"</pre>
ref="addressBean"></constructor-arg>
   </bean>
```

</beans>

2. Create UserMainConstructorDI class to test the constructor based DI.

