MCA SEM 1

ADVANCED JAVA ASSIGNMENT 3

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1) Write a program to print “Hello World” using spring framework.

TestHelloWorld.java

```
package edu.bvimit;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class TestHelloWorld {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		ClassPathXmlApplicationContext app=new
				ClassPathXmlApplicationContext("appctx3.xml");
		Hello_world hw=(Hello_world)app.getBean("hw");

		System.out.println(hw.toString());
	}

}
```

appctx3.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"
	xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd">

<bean id="hw" class="edu.bvimit.Hello_world">
<property name="name" value="Kulsum"/>
</bean>

</beans>
```

Hello_world.java

```
package edu.bvimit;
```

```java
public class Hello_world {
	String name;

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

	@Override
	public String toString() {
		return"Hello World,I'm "+name+".";
	}
}
```

OUTPUT:

2) Write a program to demonstrate dependency injection via setter method

Shape.java

```java
package edu.bvimit;

public interface Shape {
	void show();
}
```

Circle.java

```java
package edu.bvimit;
```

```
public class Circle implements Shape {
     public void show()
     {
          System.out.println("I am Circle");
     }
}
```

ShapeManager.java

```
package edu.bvimit;

public class ShapeManager {
Shape myShape;
public void show()
{
     this.myShape.show();

}
public Shape getMyShape() {
     return myShape;
}
public void setMyShape(Shape myShape) {
     this.myShape=myShape;
}
}
```

ShapeTest.java

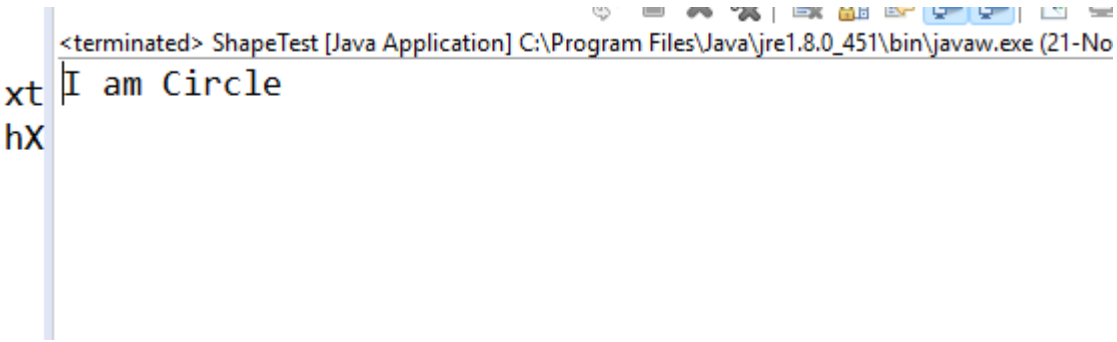
```
package edu.bvimit;

import org.springframework.context.ApplicationContext;
import
org.springframework.context.support.ClassPathXmlApplicatio
nContext;

public class ShapeTest {
     private static ApplicationContext appCon;

     public static void main(String[] args) {
```

```
        // TODO Auto-generated method stub
        appCon=new
ClassPathXmlApplicationContext("appctx4.xml");
        ShapeManager factory= (ShapeManager)
appCon.getBean("ShapeMan");
        factory.show();
    }

}
```

appctx4.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"
    xsi:schemaLocation="http://www.springframework.org/sc
hema/beans
http://www.springframework.org/schema/beans/spring-
beans.xsd">

<bean id="Circle" class="edu.bvimit.Circle"></bean>
<bean id="ShapeMan" class="edu.bvimit.ShapeManager">
<property name="myShape" ref="Circle"></property>
</bean>

</beans>
```

OUTPUT:



3) Write a program to demonstrate dependency injection via Constructor

Accounttest.java

```
package edu.bvimit;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

public class Accounttest {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
ApplicationContext con=new ClassPathXmlApplicationContext("appctx2.xml");
Account acc=(Account)con.getBean("Account");
System.out.println(acc.toString());
	}
}
```

appctx2.xml

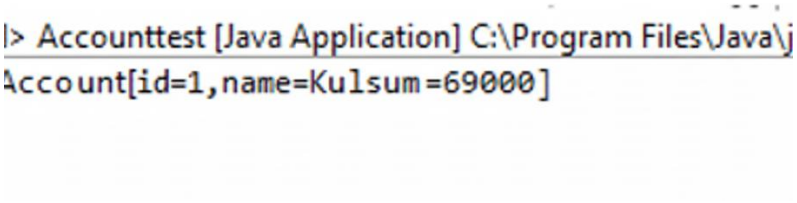
```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
	xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
	xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd">

<bean id="Account" class="edu.bvimit.Account">

<constructor-arg name="id" value="1"></constructor-arg>
<constructor-arg name="name" value="Kulsum"></constructor-arg>
<constructor-arg name="balance" value="69000"></constructor-arg>
</bean>

</beans>
```

Account.java

```
package edu.bvimit;

public class Account {
int id;
String name;
int balance;

public Account(int id,String name,int balance) {
```

```
        super();
        this.id=id;
        this.name=name;
        this.balance=balance;
}
public int getId() {
        return id;
}
public void setId(int id) {
        this.id = id;
}
public String getName() {
        return name;
}
public void setName(String name) {
        this.name = name;
}
public int getBalance() {
        return balance;
}
public void setBalance(int balance) {
        this.balance = balance;
}
@Override
public String toString() {
        return"Account[id="+id+",name=" + name + ",balance=" +balance+"]";
}

}
```

OUTPUT:



4) write a program to demonstrate Autowiring

LAPTOP.JAVA

```
package bvimit.edu;

public class Laptop {
    public void compile() {
```

```
        System.out.println("Laptop is compiling code...");
    }
}
```

DEVELOPER.JAVA

```
package bvimit.edu;

public class Developer {

    private Laptop laptop;

    public void code() {
        laptop.compile();
        System.out.println("Developer is coding...");
    }

    public void setLaptop(Laptop laptop) {
        this.laptop = laptop;
    }
}
```

AUTOWIRETEST.JAVA

```
package bvimit.edu;


import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;


public class AutowireTest {


   public static void main(String[] args) {
```

```
        ApplicationContext context = new
ClassPathXmlApplicationContext("appctx6.xml");


        Developer dev = (Developer) context.getBean("developer");
        dev.code();
    }
}
```

APPCTX6.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"
       xsi:schemaLocation="
       http://www.springframework.org/schema/beans
       http://www.springframework.org/schema/beans/spring-
beans.xsd">

    <bean id="laptop" class="bvimit.edu.Laptop"/>

    <bean id="developer" class="bvimit.edu.Developer"
autowire="byName"/>

</beans>
```

OUTPUT: