

1. Analyze the following code given below, which is a TelecommunicationSystem implemented with the help of core java. Migrate it to Spring 4 and use the following features of spring.
 - a. Annotation based Spring Configuration
 - b. XML based Spring Configuration
 - c. Dependency Injection
 - d. Spring Beans
 - e. AOP
 - f. Use hibernate to insert records into the database.
 - g. Use Maven for managing dependencies.
 - h. Follow best practices
 - i. Use proper package naming conventions.

```
package com.despat;
public interface Call {
    void makeWhatsAppCall();
    void makeCall();
    void makeVideoCall();
}
```

```
-----
package com.despat;
public class CallImpl implements Call {
    @Override
    public void makeWhatsAppCall() {
        System.out.println("Whats App Call!");
    }
    @Override
    public void makeCall() {
        System.out.println("Audio Call");
    }
    @Override
    public void makeVideoCall() {
        System.out.println("Video Call");
    }
}
```

```
-----
package com.despat;

public interface Communicate extends Call, Message{
}

package com.despat;

public class CommunicateImpl implements Communicate{
    CallImpl callImpl = null;
    MessageImpl messageImpl = null;
    public CommunicateImpl(){
        callImpl = new CallImpl();
        messageImpl = new MessageImpl();
    }
}
```

```

    }

    @Override
    public void makeWhatsAppCall() {
        callImpl.makeWhatsAppCall();
    }

    @Override
    public void makeCall() {
        callImpl.makeCall();
    }

    @Override
    public void makeVideoCall() {
        callImpl.makeVideoCall();
    }

    @Override
    public void dispWhatsAppMessage() {
        messageImpl.dispWhatsAppMessage();
    }

    @Override
    public void dispMessage() {
        messageImpl.dispMessage();
    }
}

-----

package com.despat;

public class CommunicationSystem {
    public static void main(String[] args) {

        Configurartion configurartion = new Configurartion();
        configurartion.configure();
        MessageBean message = configurartion.getMessageBean();
        message.dispMessage();
        //message.dispWhatsAppMessage();

        /*Message message = new MessageImpl();
        message.dispMessage();
        message.dispWhatsAppMessage();*/

        /*Call call = new CallImpl();
        call.makeCall();
        call.makeVideoCall();
        call.makeWhatsAppCall();

        Communicate communicate = new CommunicateImpl();
        communicate.dispMessage();
        communicate.dispWhatsAppMessage();
        communicate.makeCall();
        communicate.makeVideoCall();
        communicate.makeWhatsAppCall();*/
    }
}

```

```
-----  
  
package com.despat;  
  
public class Configurartion{  
    static MessageBean messageBean = null;  
    public static void configure(){  
        messageBean = new MessageBean();  
    }  
    public void setMessageBean(MessageBean messageBean) {  
        Configurartion.messageBean = messageBean;  
    }  
    public MessageBean getMessageBean() {  
        return messageBean;  
    }  
}
```

```
-----  
  
package com.despat;  
  
interface Message {  
  
    void dispWhatsAppMessage();  
  
    void dispMessage();  
  
}
```

```
-----  
  
package com.despat;  
  
public class MessageBean {  
    private Message message;  
    public MessageBean(){  
        //message = new MessageImpl();  
        message = new MessageEmoticons();  
    }  
    public Message getMessage() {  
        return message;  
    }  
  
    public void setMessage(Message message) {  
        this.message = message;  
    }  
  
    void dispWhatsAppMessage(){  
        message.dispWhatsAppMessage();  
    }  
  
    void dispMessage(){  
        message.dispMessage();  
    }  
  
}
```

```
-----
```

```
package com.despat;

public class MessageEmoticons implements Message{

    @Override
    public void dispWhatsAppMessage() {
        System.out.println("Whats App Message!");
    }
    @Override
    public void dispMessage() {
        System.out.println("Text Message With Emoticons!");
    }
}
```

```
-----

package com.despat;

class MessageImpl implements Message
{

    @Override
    public void dispWhatsAppMessage() {
        System.out.println("Whats App Message!");
    }
    @Override
    public void dispMessage() {
        System.out.println("Text Message!");
    }
}
```