

Modificación Patrón Decorator

Objetivo

Crear un nuevo decorador que agregue el pie de página con la información de la empresa que envía el correo electrónico

Resolución

A continuación, se detallarán los pasos realizados para completar el objetivo de la tarea

- i. Crear el contenedor de datos “FooterMessage” el cual contendrá los datos del correo y pie de página

```
public class FooterMessage implements IMessage {  
  
    private CustomerMessage customerMessage;  
    private String companyName;  
    private String companyAddress;  
    private String companyTelephone;  
    private String companyEmail;  
  
    public FooterMessage (CustomerMessage customer, String name, String address, String phone, String email) {  
        this.customerMessage = customer;  
        this.companyName = name;  
        this.companyAddress = address;  
        this.companyTelephone = phone;  
        this.companyEmail = email;  
    }  
  
    @Override  
    public IMessage processMessage() { return this; }  
  
    @Override  
    public String toString() {  
        return customerMessage.toString() + "\n FooterMessage{" + "companyName=" + companyName +  
            ", companyAddress=" + companyAddress + ", companyTelephone=" + companyTelephone +  
            ", companyEmail=" + companyEmail + '}';  
    }  
  
    @Override  
    public void setContent(String content) {  
        throw new UnsupportedOperationException("Not supported yet.");  
    }  
  
    @Override  
    public String getContent() { return toString(); }  
  
    public String getCompanyName() { return companyName; }  
    public void setCompanyName(String companyName) { this.companyName = companyName; }  
    public String getCompanyAddress() { return companyAddress; }  
    public void setCompanyAddress(String companyAddress) { this.companyAddress = companyAddress; }  
    public String getCompanyTelephone() { return companyTelephone; }  
    public void setCompanyTelephone(String companyTelephone) { this.companyTelephone = companyTelephone; }  
    public String getCompanyEmail() { return companyEmail; }  
    public void setCompanyEmail(String companyEmail) { this.companyEmail = companyEmail; }  
    public CustomerMessage getCustomerMessage() { return customerMessage; }  
    public void setCustomerMessage(CustomerMessage customerMessage) { this.customerMessage =  
customerMessage; }  
}
```

- ii. Crear el decorador llamado "FooterDecorator" contendrá el mensaje con la actualización requerida

```
public class FooterDecorator extends MessageDecorator {  
  
    public FooterDecorator(IMessage message) {  
        super(message);  
    }  
  
    @Override  
    public IMessage processMessage() {  
        message = message.processMessage();  
        message = obtenerMensaje();  
        return message;  
    }  
  
    public IMessage obtenerMensaje() {  
        return message;  
    }  
}
```

- iii. Actualización del DecoratorMain, para utilizar el nuevo decorador creado

```
public class DecoratorMain {  
  
    public static void main(String[] args) {  
  
        CustomerMessage customerMessage = new CustomerMessage(  
            "Oscar Blancarte", "oscarblancarte3@gmail.com", "554433445566");  
        System.out.println("Original Message ==> " + customerMessage);  
  
        FooterMessage footerMessage = new FooterMessage(  
            customerMessage, "Nombre", "Direccion", "Telefono", "Email");  
        System.out.println("Original + Footer Message ==> " + footerMessage);  
  
        IMessage message1 = new EncryptMessage("user", "HG58YZ3CR9123456",  
            new SOAPEnvelopMessage(  
                new XMLFormatterDecorate(  
                    new FooterDecorator(footerMessage) ) ) ).processMessage();  
        System.out.println("message1 =====>\n"  
            + message1.getContent() + "\n\n");  
  
        IMessage message2 = new SOAPEnvelopMessage(  
            new EncryptMessage("user", "HG58YZ3CR9123456",  
                new XMLFormatterDecorate(  
                    new FooterDecorator(footerMessage) ) ) ).processMessage();  
        System.out.println("message2 =====>\n"  
            + message2.getContent());  
  
        IMessage message3 = new XMLFormatterDecorate(  
            new FooterDecorator(footerMessage) ).processMessage();  
        System.out.println("message3 =====>\n"  
            + message3.getContent());  
    }  
}
```

Patrón Decorator

Para implementar el patrón Decorator, el paso inicial fue crear la clase `FooterMessage`; la cual será la encargada de contener la información de la compañía y la información del `CustomerMessage`.

Una vez que tenemos nuestra clase de tipo mensaje, se procedió a implementar la clase `FooterDecorator`, la cual será la encargada de encapsular el mensaje que se necesita enviar

Para poder utilizar el nuevo decorador, se debe realizar los siguientes pasos.

- Crear los datos para el `CustomerMessage`
- Crear los datos para el `FooterMessage`; el cual contendrá los datos del paso a
- Aplicar el decorador `FooterDecoratos` como base; y después aplicar el resto de decoradores según sea necesario
- Aplicar decorador para crear el XML
- Aplicar decorador para las definiciones del SOAP
- Aplicar decorador para la encriptación de los datos

Como ejemplo de la implementación hasta el XML tendríamos el siguiente resultado

```
message3 =====>
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<oscarblancarte.ipd.decorator.impl.message.FooterMessage>
  <companyAddress>Direccion</companyAddress>
  <companyEmail>Email</companyEmail>
  <companyName>Nombre</companyName>
  <companyTelephone>Telefono</companyTelephone>
  <content>CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}
  FooterMessage{companyName=Nombre, companyAddress=Direccion, companyTelephone=Telefono, companyEmail=Email}</content>
  <customerMessage>
    <content>CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}</content>
    <email>oscarblancarte3@gmail.com</email>
    <name>Oscar Blancarte</name>
    <telephone>554433445566</telephone>
  </customerMessage>
</oscarblancarte.ipd.decorator.impl.message.FooterMessage>
```

Resultado

Finalmente tenemos el siguiente resultado con los cambios realizado:

run:

Original Message ==> CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}

Original + Footer Message ==> CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}

FooterMessage{companyName=Nombre, companyAddress=Direccion, companyTelephone=Telefono, companyEmail=Email}

message1 =====>

```

yL6LOi2ti49snrUs07FR8dLIF8yK4quF/YucCRHvgM0ScPoxvIb/vZZ5NVTQqCdVctcR1W7oCQkK
DyXp/oEjrHmYPjkz+0JJ1wAeGK8Xw6z89I/P+1fClOgoJC7EoSQot3upYxg8f1W97fjB+syO1HLb
3nKlfrh0Rmjr10Aqheh5wKwWkjGyYdpLQ4z+802Gh8sn7j1UY5teBzvcHkIOR+DrU8hHWMbYs
2Pv08V8L+FTSUIO4W/xRDR4/axXyv/0CHHiejRW9f2PsBuL3SGzF8OvaBI7jlnPZVbStO13F9Qs3
IGH+/JQnMsV73+NTfPNhxdxUjGF4YkMVTyXifG6+oa4hVDe3pN9/lvu9NW7Jlss/AmQ3jsVaR8G
2xEpaPxpvs2fNs5hd3FWCJlqw7e4lbUd/4NUmInJHnVsXAJpQviZdD0dV5IF/CEOL7ykR6clX7Z3
ZIHhIk1YUzg4/bPIRAQOsd3DAFyzYkepNnVjzh8aiU53izR6bvWdr3XFOTImL9AHPpDUPaW6bR
KFHJ1lizw8Qr3jUQ/O757AhdH+UfgEMN3doIWDGqyEsyHwHK3DAOVi332CLPqV1hmcGiJDa0Fh02
flmQm5MzNbbQu9LeSsXoH4YYUPNBh78libww6eKzm5lzx5Tz6xdgSag48KLs48iL+R0y6p18thjt
z4MC22DlZptd16zot8ohUiBAns90iOzqdh4V7IzKEY8gblatozxpALAdp3/Q1KJbGMZozwXlviS6
qyRinyFtbZ4H227cCWLVIepcNe/InZRBWsyfEoN0QCeBLgDQBZsxHotwh0MgFGJXFyetHofOKBS4
O+Qbhe21NVurfSzwqrwl/Qg0XXM5U4ncyOVM0Dd7K52X7YM6bsXgCzeuoc5O3jQpIAQ6gDqqsik
R+CxTnMlhmieeUh7SmTdvcVZclGRT9Tg8HM97nC1oD4ROoemF2t0fSu+lzucCxAdUU0/tmUvgXxz
iwwrm9PTFPbAwOr0645Kzhe/ML38+uCSHwgrZDYLNuVcXDKHnUs9H30Tqm/BEBQ6hXSvPg/UiiDA
VJBBus36I5d8CwP2dPaILEKveg+R4EtJKmeEhclx2OsiU3fivuflyu7S8cTADsp57v8Sm2Mh97A
PlldrCQlQKvc6tfzZsXW1dfFRo/eLwWFqC2vJqW+58qbm6zPGv8gYOhFe1JR0BbFAFFOT0v2EZ
tZdV0v9oyrj41BU5/MAKgTh2U51oFw7p35dyQmKtusXAgY2dD1qBvVwBUwxg6UJrbW5Nu3vxDccRA
cYbcEd74wdYQ5n7ruBqJwUytf+QdjfBoQTvzpFgrzuKGFyNaLwrS15kKpNp1XD6ks8CJcyZgF4
XZWbFKc9IuiG9KgHNBReBf5TodNmaHGdT2w9wUtOP/jOlXv+Hs59NluVIJqE8xnJdXZJLZ2QNLQx
fU/HDAE=

```

message2 =====>

```

<soapenv:Envelope xmlns:soapenv=
"http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ser="http://service.dishweb.cl.com/">
  <soapenv:Header/>
  <soapenv:Body>
    AVWuXOHnueRabzSzoFST0nKxFui31oGsYPT6mD9BMgc1kjOwqAxDYbEfuiLjAkr/eLFw0BZRuoS
    K95XpbleZxqzHlo5/7x6s2sG7jVDQhiga66Gh20yAnksJxB5pK9pdQcg2z9USUJhtihWfX+Isf1l
    2E9wsF/gLubcu7+XhJznp0pWpDcYSAGQJiv3FuxeBU+OFeYHzDhScJE36Ok0MXkX0TsVt8kVBg1t
    uJMpexq1AWZZkPNNK20dGBfbsymntQfS/s9xK8YufX+oPCDHuQdpSvNz3KmJLOobd+3kVtHIS2ES
    w7k8Gjsn3gLSpHrBAEYejfX4gLaifE39XOTMkZQKZUGYYLbXHcZGn1eRF35HATVI8x3nTSqHpN7
    1BFmXkellmv+kJlgwtE7raECeP60BxM5NxpZWAmvpNBgseC9H5qyS/p4RckIM435VlcoCqgY1ykl
    M3dMlnKwawmnpURcyUckqScEnZmPjDLa0E52flxQTvQgIlVX41jllTglA4ijFRSMnlQ4A1n8iMzt
    hAxfWJBEZfqlAh+UfETOs7UMiEzzhXde17qKqLLeheAesSM8VNA81F/sT73PaZ9RFTVWMh0/J48
    AV3XLhs25eU8BlhjoY6clI6Dhw+LIblN9pOBsEXDwt3IwSrdWU2e4VnEQD9hFMBevNu58L3p5L5q
    jBfoMuC7AB8vRvRKgXWOZ8W0hlcG7f4vF1c8PcovhUTPGFuHX7tQmNllwr76TEeEwofarOHcldXd
    8ZtmI9MqjwHnuR1VS73P75oNSWzqgAYLSwIFRJR7R7Qg8sQhVc6HHivfYCUyeWOIEKIFKedRpDio2
    pKUn9/J8Wlwnqnl2FiWn/TTIWFc+Ot+GSEuXCFe7rVoJJRS+8T9OH0YB1Hud6pWS65wCutTOfc9
    iTlffLANT0zKEydfBSf1m+dwcgBy8poGpQLtfrKvCUMUWvRoeDolnogzmoJTU/iGE7nSiVceABCT
    fvSs77leMRzQD2lr23LddqPbldZwxyetCd7Q6aaw+mT4H7frylELbhlfuYa9Ns2/qxZbWzI0Goxu
    RKd6iyKLIXOoZzqVodMUK+EJTGalzNttuhdr4FDdB+FEM65oQ7qghXegTzFTyDExbhge7q/K8d9
    EPvdKIQ4tzf81r7cFgXjGM0YQuCVHypRSA==
  </soapenv:Body>
</soapenv:Envelope>

```

message3 =====>

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<oscarblancarte.ipd.decorator.impl.message.FooterMessage>

<companyAddress>Direccion</companyAddress>

<companyEmail>Email</companyEmail>

<companyName>Nombre</companyName>

<companyTelephone>Telefono</companyTelephone>

<content>CustomerMessage{name=Oscar Blancarte,

email=oscarblancarte3@gmail.com, telephone=554433445566}

FooterMessage{companyName=Nombre, companyAddress=Direccion, companyTelephone=Telefono,

companyEmail=Email}</content>

<customerMessage>

<content>CustomerMessage{name=Oscar Blancarte,

```
email=oscarblancarte3@gmail.com, telephone=554433445566}</content>
<email>oscarblancarte3@gmail.com</email>
<name>Oscar Blancarte</name>
<telephone>554433445566</telephone>
</customerMessage>
</oscarblancarte.ipd.decorator.impl.message.FooterMessage>
```

BUILD SUCCESSFUL (total time: 0 seconds)



```
Decorator (run) x Patrones - D:\ABUESTAN\Documents\EXXIS DOCUMENTOS\Mios\UPS\M03 - Patrones de diseño de software\Git\Patrones\Patrones x

run:
Original Message ==> CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}
Original + Footer Message ==> CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}
FooterMessage{companyName=Nombre, companyAddress=Direccion, companyTelephone=Telefono, companyEmail=Email}

message1 =====
yL6L0i2t149snrUs07FR8dL1F8yK4quF/YucCRHvgM0ScPoxv1b/vZ25NVtoqCdVctcR1W7oCQKk
DyXp/oeJrHmYpjkZ+0J1wAeGR8Xw6z89I/P+1fCl0goJC7EoSQt3upXg8f1W97fjB+syolHLB
3nKltfzrhb0Rmjrl0Aqheh5wWwKjGyYdpLQ4z+802Gh8sn7j1UY5teBzvcHkIOR+DrU8hHwMBYs
2Pv08V8L+FSTUI04W/xRDR4/axXyv/0CHHieJRW9f2PaBuL3SGzF80vaB17jInPZVbSto13F9Qa3
1GH+/JQnMv73+NTfPNhxdxuUjGF4YkMTYxiF6+oa4hVDe3pN9/1vu5NW7JIss/AmQ3jsVa88G
2xEpePxpvs2fNs5hd3FWCJqW7e41bUd/4NUmInJHnVsXAJpQv1Zd0dV51F/CE0L7ykR6c1X723
ZJHEhIk1YUzg4/bP1RJAQ0eD3DAFyzYkepNnVjzh8aiU53icRebvwdr3XF0TlM9AHpDUPaW6bR
KFHJl1izw8Q3jUQ/0757AhH+UFGEMN3do1WDGgyEsyHwHk3DA0V1332CLPqV1hmcG4JDa0Fh02
f1mQm5MzNbQu9LeSx0h4YYUPNBh781ibw6eKzm51zx5Tz6xdgSag48KLs48iL+R0y6p18thjt
z4Mc22D1ZptdI6zot8ohU1BAns90i0zqdh4V71zKEY8gbIatozxpLaAdp3/Q1KJbGMZozwX1vS6
qyRinyFtbz4H227cCWLVIepcNe/InZREWsyfEoNQCeBLgQDBZxHotwh0MgFGJXfYetHofOKBS4
04Qbhe2lNVurfSzgwrw1/Qg0XXM5U4ncy0VM0d7K5X2Y7M6bsXgCZeuwoc503jQpIAQ6gDqgsik
R+CxTnM1hmieeUh75mTdcvZcJGRt9Tg8HM97nCl0D4R0oemF2t0fSu+1rucCxAdU00/tmUvqXkz
iwwrmZPTfpbAwOr0645Kzhe/ML38+uCSHwgrZDYLnVcXDKHnUs9H30Tqm/BEBQ6hXsvPg/UiIDA
VJBBus3615d8CwF2dPaILEKveg+R4EtJKmeEhcIX20siU3fivufuy78S8cTADsp57v8Sm2Hn97A
P1ldrCQ10Kvcm6tfzZaxWldfFRo/eLwWFqC2vJqW+58qbm6zFGv8gYohFelJR0BbfEAFfOT0v2EZ
tadV0v9oyrj41BUS/MAKqTh2U51oFw7p35dyQmktusXAgY2d1qBvWBUwmg6UJrbWSNu3vxdccRA
cVbced74wdYQ5n7ruBqJwUytf+QdjFBoQTVzpFgrzuKGFyalaLwrS15kKpNp1XD6ks8CJcyZgF4
XZbWFK9TuiGKqHNBREBf5T0dNmaHGD2w9Wt0R/jOixv+Hs59HluVIJqE8xnJXZJL2Z2QLQx
fU/HDAE=

message2 =====
<soapenv:Envelope xmlns:soapenv=
"http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ser="http://service.dishweb.cl.com/">
  <soapenv:Header/>
  <soapenv:Body>
    NVWuX0NueRAhzStoFST0nKxFui3loGeYPT6mD9BMgclkjOwqAXDybEfuilJjAkr/eLFw0BZRuoS
    K9SXpbleZxqzHio5/7x6s2sG7jVDQhiga666h20yAnksJx5pK9pdQcg2z9USJhtihWFX+Isf1l
    2E9w8f/glubcu7+XhJznpuPwDcYSAGQJ1v3FuxebU+OfEYHsDhScJ3E60kMKXK0TsVt9kVBgtl
    uJmPexqJLAWZzkPNNK20dGBfbsymntQfS/s9xK8YufX+oPCDHuQdpSvNz3RmJLoobd+3kVtHIS2ES
    w7k8Gj5n3gSpHFrBAEYejfX4gLaife39XOTMK2QKZUGYLYbXhCZGnleRF35HATVI8x3nTSqHpN7
    1BFmxke1lmv+kIJgwte7raCeP60BxM5NxpZWampvNBgseC9H5qys/p4RckIM43Sv1coCggYlykI
    M3dMlnKwawmpURcyUckq5cEnZmPjDLA0E52f1xQTVpQgIIVX41j1ITgIA41jFRSMnIQ4A1n8iM2t
    hXknFWJBZ2FqLAh+UfET0sTUMiEzzhXde17qKqqlEheAesSM5VNA81f/sT73PaZ9RFTVMh0/348
    AVX3Lhs25eUSBlhjoY6cITfEdhw+L1Bln9p0BsEXDwt3lwSrdU2e4VnEQD9hFMBeVhu58L3p5L5q
    gBfoMuC7AB8vRvRKXxW028W0hlcG7f4vF1c8PcovhUTPGFuHX7tQmN1lw76TEeEwofar0HcldXd
    82tm19MqWvHnuR1VS73P75oNSWzqgAYLSwlFRJ7R7Qg8sQhVc6HH1VfYCUyeW0IEKIFKedRDP1o2
    pUn9/J8W1vnqkn12F1Wn/t1WFC+Ot+GSEuXCF7rVoJURS+8T90H0YB1Hud6pWS65wCutTOFc9
    i7IfLANT0zKeeYdFBSf1m+dwcgBy8poGpQLTfkrVUMUWzOeDoInogzmoJTU/igE7n5iVceABCT
    fvs771eMRzQD21r23LddqPbldZwxyetCd7Q6aaw+mT4H7fry1ELbhIfuYa9Ns2/qxZbWzIOGoxu
    RKd6iyKLIXOoZzqVodMUK+EJTGaIzNttuhdr4FDdB+FEM65oQ7qghXegTzfftTyDExbhge7q/K8d9
    EFvdKIQ4tzf8lr7cFgXjGM0YQuCVHypR8A==
  </soapenv:Body>
</soapenv:Envelope>

message3 =====
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<oscarblancarte.ipd.decorator.impl.message.FooterMessage>
  <companyAddress>Direccion</companyAddress>
  <companyEmail>Email</companyEmail>
  <companyName>Nombre</companyName>
  <companyTelephone>Telefono</companyTelephone>
  <content>CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}
FooterMessage{companyName=Nombre, companyAddress=Direccion, companyTelephone=Telefono, companyEmail=Email}</content>
  </customerMessage>
  <content>CustomerMessage{name=Oscar Blancarte,
email=oscarblancarte3@gmail.com, telephone=554433445566}</content>
  <email>oscarblancarte3@gmail.com</email>
  <name>Oscar Blancarte</name>
  <telephone>554433445566</telephone>
</customerMessage>
</oscarblancarte.ipd.decorator.impl.message.FooterMessage>

BUILD SUCCESSFUL (total time: 0 seconds)
```