

**Método “Builder” – Constructor de pizzas completo**

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Modelos de Programación I

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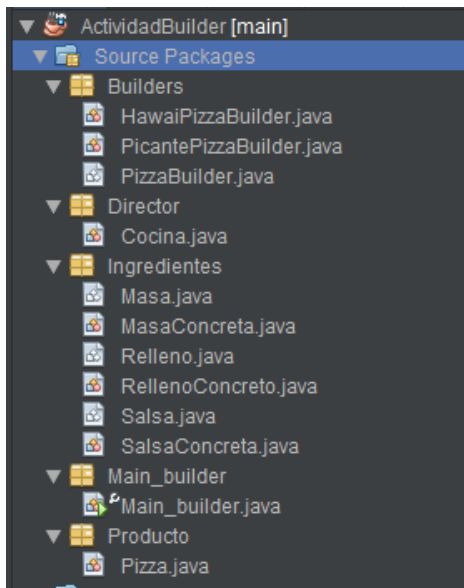
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## Contenido

Paquetes.....	3
Builders.....	3
HawaiPizzaBuilder.java .....	3
PicantePizzaBuilder.java.....	4
PizzaBuilder.java.....	5
Director .....	5
Cocina.java .....	5
Ingredientes .....	6
Masa.java .....	6
Relleno.java .....	6
Salsa.java .....	6
MasaConcreta.java.....	7
RellenoConcreto.java .....	7
SalsaConcreta.java .....	8
Main_builder .....	8
Main_builder.java .....	8
Producto.....	9
Pizza.java .....	9

## Paquetes



## Builders

### HawaiiPizzaBuilder.java

```
package Builders;

import Ingredientes.Masa;
import Ingredientes.MasaConcreta;
import Ingredientes.Relleno;
import Ingredientes.RellenoConcreto;
import Ingredientes.Salsa;
import Ingredientes.SalsaConcreta;
import Producto.Pizza;

public class HawaiiPizzaBuilder extends PizzaBuilder {

    public HawaiiPizzaBuilder() {
        super.pizza = new Pizza();
    }

    public void buildMasa() {
        Masa tipoMasa = new MasaConcreta();
        pizza.setMasa(tipoMasa.masaSuave());
    }

    public void buildSalsa() {
        Salsa tipoSalsa = new SalsaConcreta();
        pizza.setSalsa(tipoSalsa.salsaDulce());
    }

    public void buildRelleno() {
        Relleno tipoRelleno = new RellenoConcreto();
        pizza.setRelleno(tipoRelleno.rellenoChorizo());
    }

}
```

## PicantePizzaBuilder.java

```
1  package Builders;
2  import Ingredientes.Masa;
3  import Ingredientes.MasaConcreta;
4  import Ingredientes.Relleno;
5  import Ingredientes.RellenoConcreto;
6  import Ingredientes.Salsa;
7  import Ingredientes.SalsaConcreta;
8  import Producto.Pizza;
9
10 public class PicantePizzaBuilder extends PizzaBuilder {
11
12     public PicantePizzaBuilder() {
13         super.pizza = new Pizza();
14     }
15
16     public void buildMasa() {
17         Masa tipoMasa = new MasaConcreta();
18         pizza.setMasa(tipoMasa.masaCocida());
19     }
20
21     public void buildSalsa() {
22         Salsa tipoSalsa = new SalsaConcreta();
23         pizza.setSalsa(tipoSalsa.salsaPicante());
24     }
25
26     public void buildRelleno() {
27         Relleno tipoRelleno = new RellenoConcreto();
28         pizza.setRelleno(tipoRelleno.rellenoPepinillos());
29     }
30
31 }
32
```

## PizzaBuilder.java

```
1  package Builders;
2  import Producto.Pizza;
3
4  public abstract class PizzaBuilder {
5
6      protected Pizza pizza;
7
8      public Pizza getPizza() {
9          return pizza;
10     }
11
12     public abstract void buildMasa();
13
14     public abstract void buildSalsa();
15
16     public abstract void buildRelleno();
17 }
18
```

## Director

### Cocina.java

```
1  package Director;
2
3  import Builders.PizzaBuilder;
4  import Producto.Pizza;
5
6  public class Cocina {
7
8      private PizzaBuilder pizzaBuilder;
9
10     public Pizza cocinarPizza(PizzaBuilder pb) {
11         pizzaBuilder = pb;
12         pizzaBuilder.buildMasa();
13         pizzaBuilder.buildSalsa();
14         pizzaBuilder.buildRelleno();
15         return pizzaBuilder.getPizza();
16     }
17 }
18
```

## Ingredientes

Masa.java

```
1  package Ingredientes;
2
3  public abstract class Masa {
4      public abstract String masaSuave();
5      public abstract String masaCocida();
6  }
7
```

Relleno.java

```
1  package Ingredientes;
2
3  public abstract class Relleno {
4      public abstract String rellenoChorizo();
5      public abstract String rellenoPepinillos();
6  }
7
```

Salsa.java

```
1  package Ingredientes;
2
3  public abstract class Salsa {
4      public abstract String salsaPicante();
5      public abstract String salsaDulce();
6  }
7
```

## MasaConcreta.java

```
1  package Ingredientes;
2
3  public class MasaConcreta extends Masa {
4
5      @Override
6      public String masaSuave() {
7          return "Masa suave";
8      }
9
10     @Override
11     public String masaCocida() {
12         return "Masa cocida";
13     }
14
15 }
16
```

## RellenoConcreto.java

```
1  package Ingredientes;
2
3  public class RellenoConcreto extends Relleno {
4
5      @Override
6      public String rellenoPepinillos() {
7          return "Pepinillos";
8      }
9
10     @Override
11     public String rellenoChorizo() {
12         return "Chorizo";
13     }
14
15 }
16
```

## SalsaConcreta.java

```
1  package Ingredientes;
2
3  public class SalsaConcreta extends Salsa {
4
5      @Override
6      public String salsaPicante() {
7          return "Salsa picante";
8      }
9
10     @Override
11     public String salsaDulce() {
12         return "Salsa dulce";
13     }
14 }
15
16
```

## Main\_builder

### Main\_builder.java

```
1  package Main_builder;
2
3  import Director.Cocina;
4  import Builders.HawaiPizzaBuilder;
5  import Builders.PicantePizzaBuilder;
6  import Builders.PizzaBuilder;
7  import Producto.Pizza;
8
9  public class Main_builder {
10
11     public static void main(String[] args) {
12         Cocina cocina = new Cocina();
13
14         PizzaBuilder objHawaiPizzaBuilder = new HawaiPizzaBuilder();
15         PizzaBuilder objPicantePizzaBuilder = new PicantePizzaBuilder();
16
17         Pizza pizza = cocina.cocinarPizza(objPicantePizzaBuilder);
18     }
19
20 }
21
```



## Producto

Pizza.java

```
1  package Producto;
2
3  public class Pizza {
4
5      private String masa;
6      private String salsa;
7      private String relleno;
8
9      public void setMasa(String masa) {
10         this.masa = masa;
11     }
12
13     public void setSalsa(String salsa) {
14         this.salsa = salsa;
15     }
16
17     public void setRelleno(String relleno) {
18         this.relleno = relleno;
19     }
20
21     public String getMasa() {
22         return masa;
23     }
24
25     public String getSalsa() {
26         return salsa;
27     }
28
29     public String getRelleno() {
30         return relleno;
31     }
32
33 }
34
```