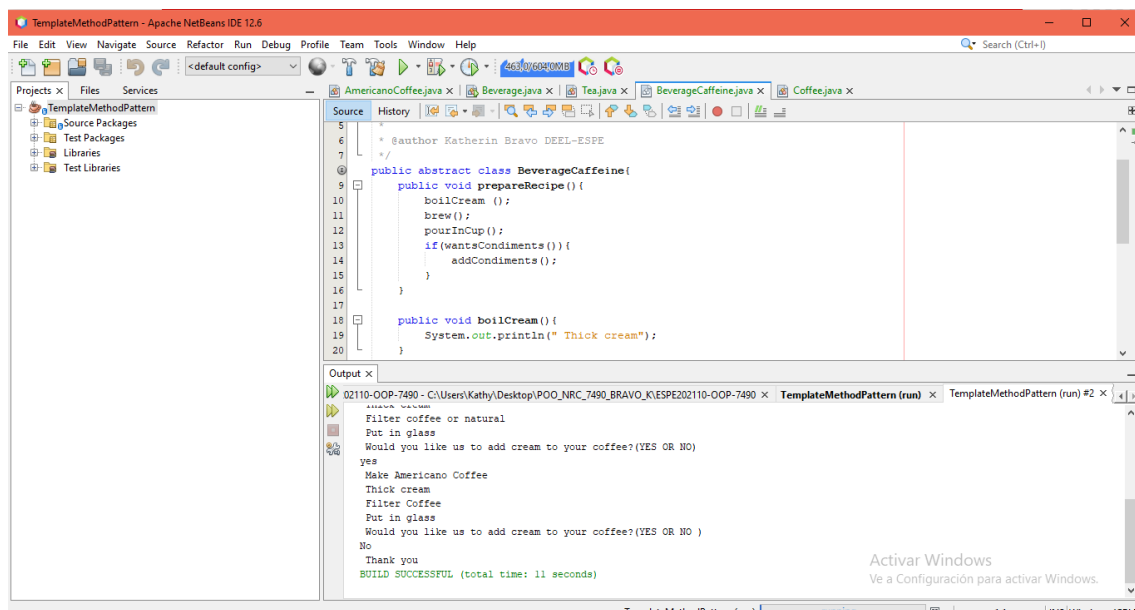


# OOP WS35 TEMPLATE METHOD PATTERN

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Template method design pattern is to define an algorithm as a skeleton of operations and leave the details to be implemented by the child classes. The overall structure and sequence of the algorithm are preserved by the parent class. These steps can be an abstract method that will be implemented by its subclasses. The helper methods may be either abstract methods, in which case subclasses are required to provide concrete implementations, or hook methods, which have empty bodies in the superclass. Subclasses can (but are not required to) customize the operation by overriding the hook methods.



The screenshot shows the Apache NetBeans IDE 12.6 interface. The main editor displays the `BeverageCaffeine.java` file, which implements the Template Method Pattern. The code defines an abstract class `BeverageCaffeine` with a `prepareRecipe()` method that calls `boilCream()`, `brew()`, `pourInCup()`, and `addCondiments()`. The `boilCream()` method is implemented to print "Thick cream". The `main` method in `BeverageCaffeine.java` creates an instance of `AmericanoCoffee` and calls `prepareRecipe()`. The output window shows the execution results, including the menu prompts and the final output "BUILD SUCCESSFUL (total time: 11 seconds)".

```
5
6  * @author Katherin Bravo DEEL-ESPE
7  */
8
9  public abstract class BeverageCaffeine{
10     public void prepareRecipe(){
11         boilCream ();
12         brew();
13         pourInCup();
14         if(wantsCondiments()){
15             addCondiments();
16         }
17     }
18
19     public void boilCream(){
20         System.out.println(" Thick cream");
21     }
22 }
```

Output x

```
02110-OOP-7490 - C:\Users\Kathy\Desktop\POO_NRC_BRAVO_K\ESPE202110-OOP-7490 - TemplateMethodPattern (run) x TemplateMethodPattern (run) #2 x
BUILD SUCCESSFUL
Filter coffee or natural
Put in glass
Would you like us to add cream to your coffee?(YES OR NO)
yes
Make Americano Coffee
Thick cream
Filter Coffee
Put in glass
Would you like us to add cream to your coffee?(YES OR NO )
No
Thank you
BUILD SUCCESSFUL (total time: 11 seconds)
```