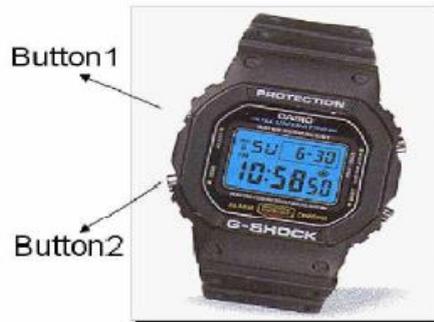


Supervised Work 5: State/Transition Diagram and Activity Diagram

Exercise 1:



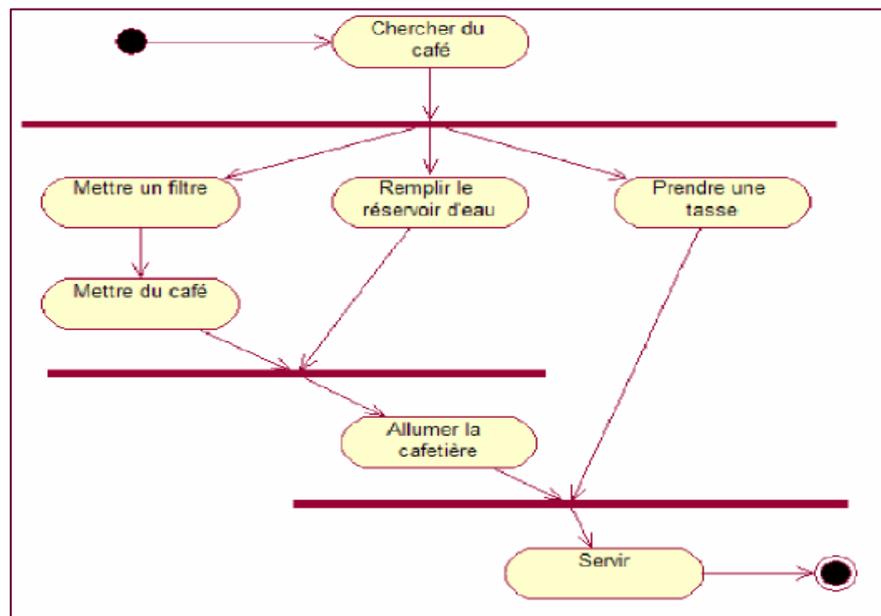
- 1) A watch displays the time; If you press button 1 twice, the watch goes into “modification” mode. Each press of button 2 increments the time by one unit. If you press button 1 again, you can set the minutes in the same way as the hours. If you press button 1 again, the watch displays the current time again. Develop the corresponding state/transition diagram.
- 2) During setting the hour or minutes when button 1 is pressed for more than two seconds, the hours or the minutes speeds quickly until the pressure is released. We add a button 3 which allows you to backlight the LCD screen. Complete the state/transition diagram of question 1.

Exercise 2: Construct an activity diagram representing the use of an electric coffee maker:

- First state: looking for coffee
- Latest status: Serving coffee

Please, feel free to complete the behavior of the electric coffee maker.

Solution :



Exercise 3 : Chocolate mousse (UML2 by practice, P. Roques)

Here is the recipe for making a good chocolate mousse:

- Start by breaking the chocolate into pieces, then melt it.
- At the same time, break the eggs, separating the whites from the yolks.
- When the chocolate is melted, add the egg yolks.
- Beat the egg whites until they are very stiff.
- Gently incorporate them into the chocolate mixture without breaking them.
- Pour into individual ramekins.

- Chill for at least 3 hours in the refrigerator before serving.

Question: Establish the activity diagram to model the recipe.

Exercise 4:

Construct an activity diagram to model the process **of ordering a product**. The process concerns the following actors:

Customer: who orders a product and who pays the invoice.

Cashier: who collects the customer's money.

Sales: who takes care of processing and invoicing the customer's order.

Warehouse: Who is responsible for getting the items out and shipping the order.