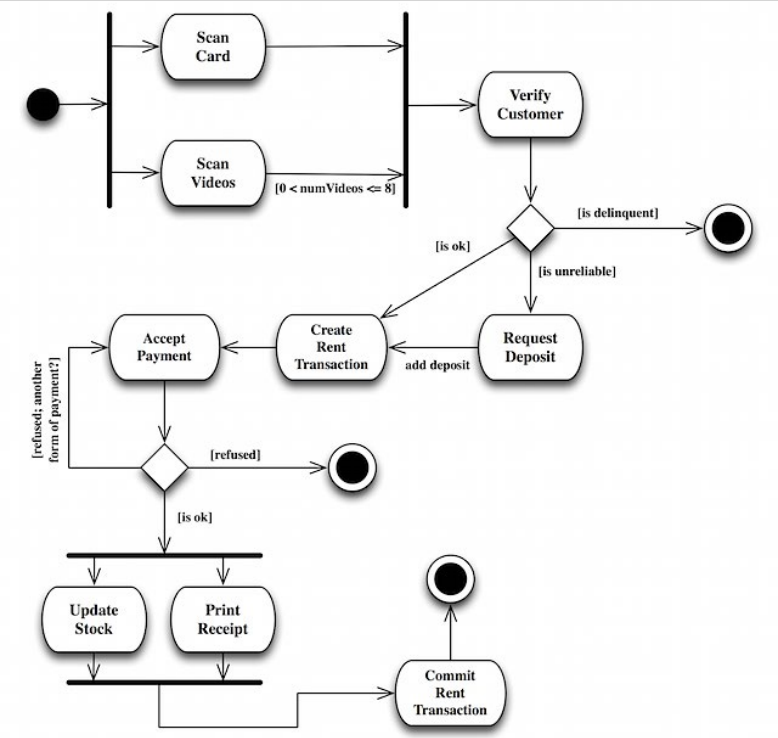
# Activity diagrams

For planning inspiration

# Disclaimer in danish:

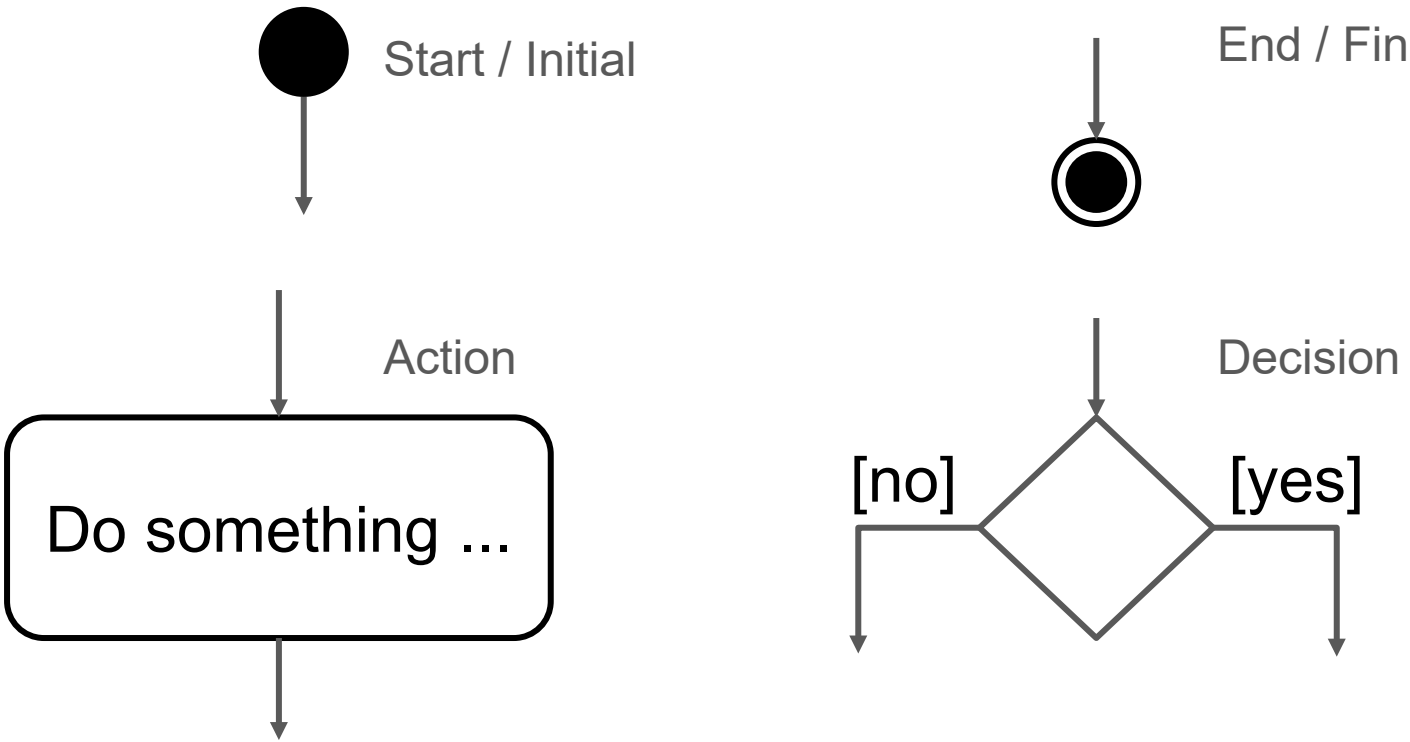
Brug denne power point til at finde inspiration til at tegne diagrammer der hjælper dig i din kode proces.
Tegn på papir I hånden, tegn i drawio eller på et whiteboard.
Det vigtige er at diagrammet giver mening for dig.
Det er det samme der står I de sidste 2 slides.

# Example of an activity diagram

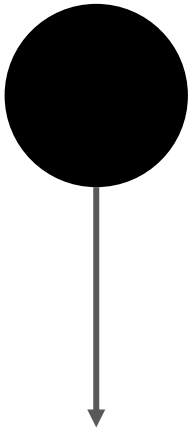


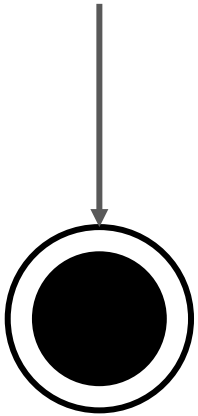

https://www.cs.colorado.edu/~kena/classes/5828/s08/supporting_materials/rent_video_activity_diagram.html

# There are four primary shapes in an activity diagram

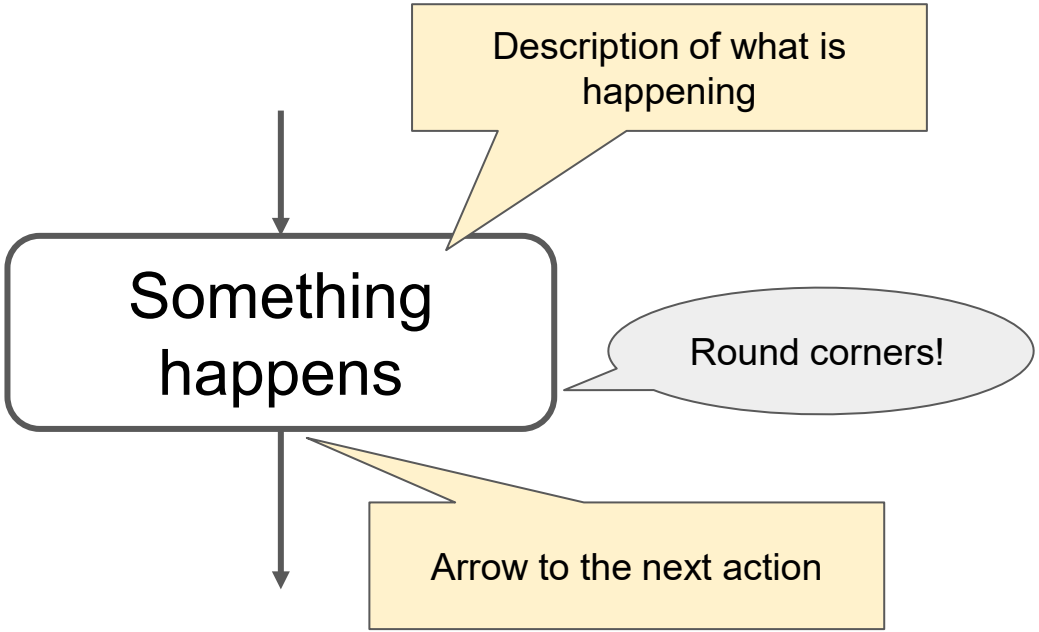


# Start and end

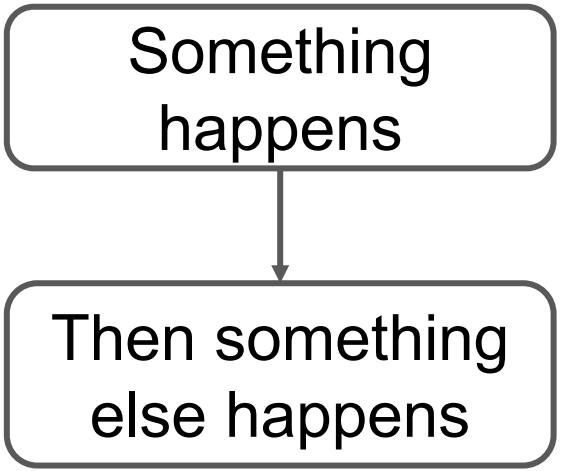




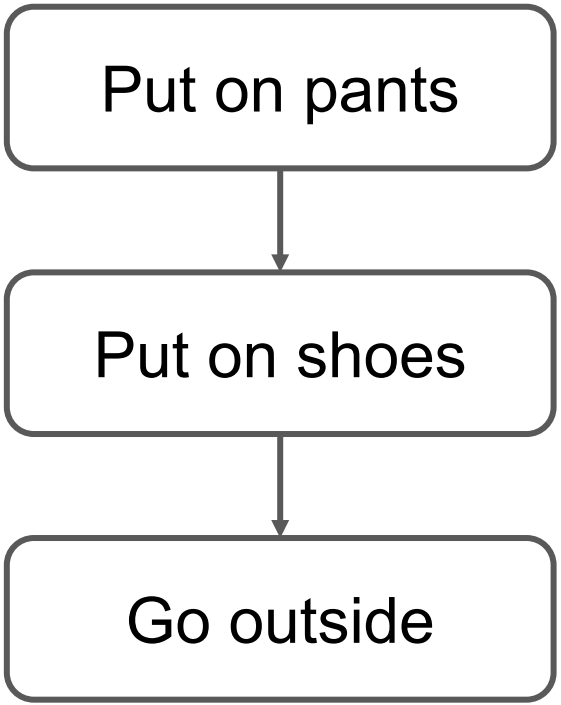
# Action


Description of what is happening
Something happens
Round corners!
Arrow to the next action

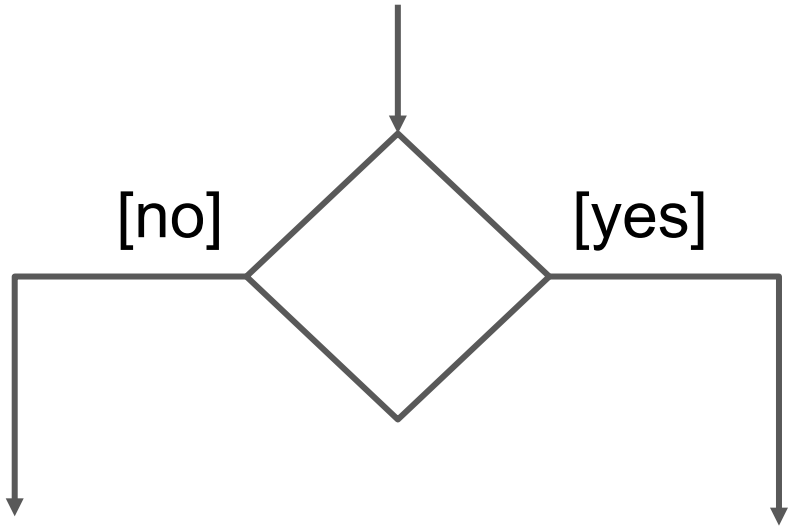
# Actions lead to other actions



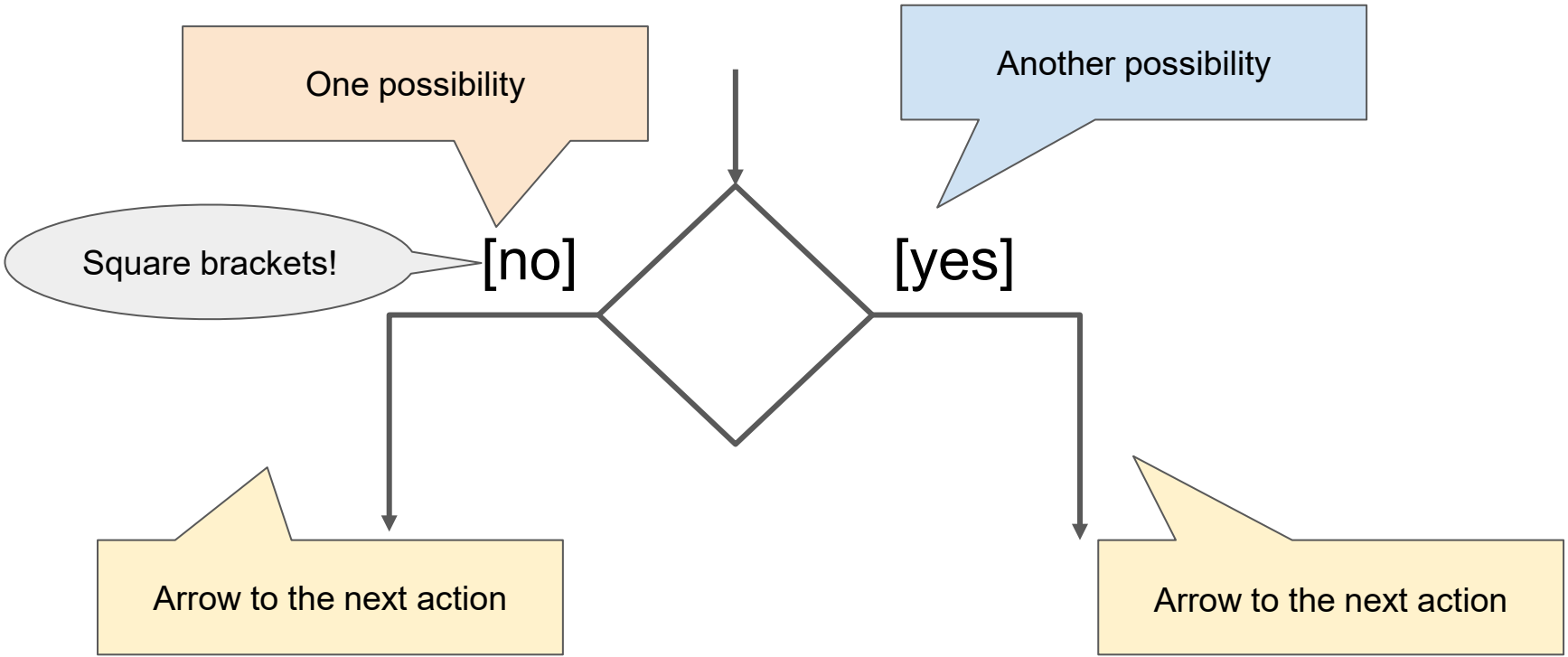
# Example of activity



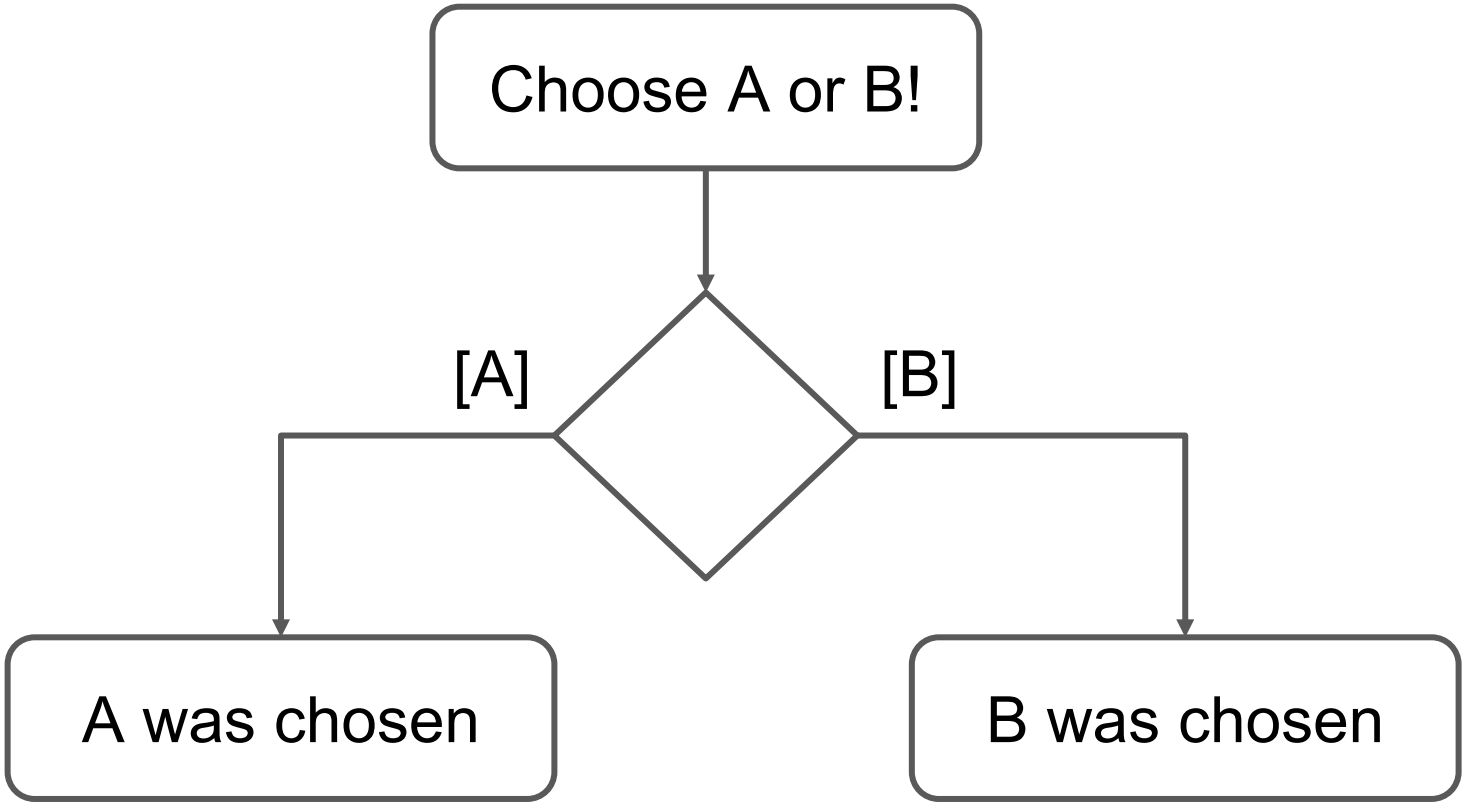
# Decision



# Decision


One possibility
Another possibility
Square brackets!
[no]
[yes]
Arrow to the next action
Arrow to the next action

# Decision



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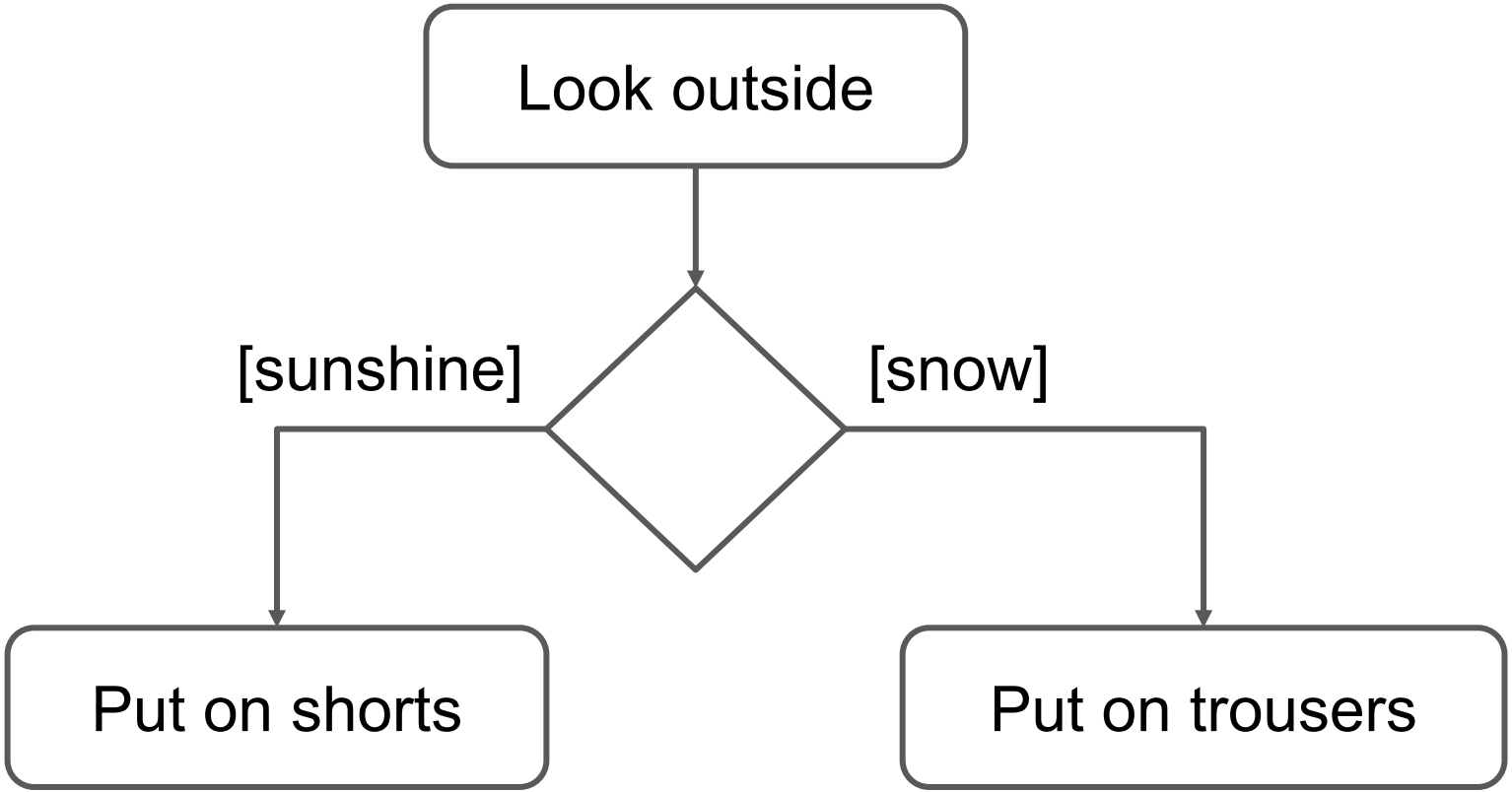
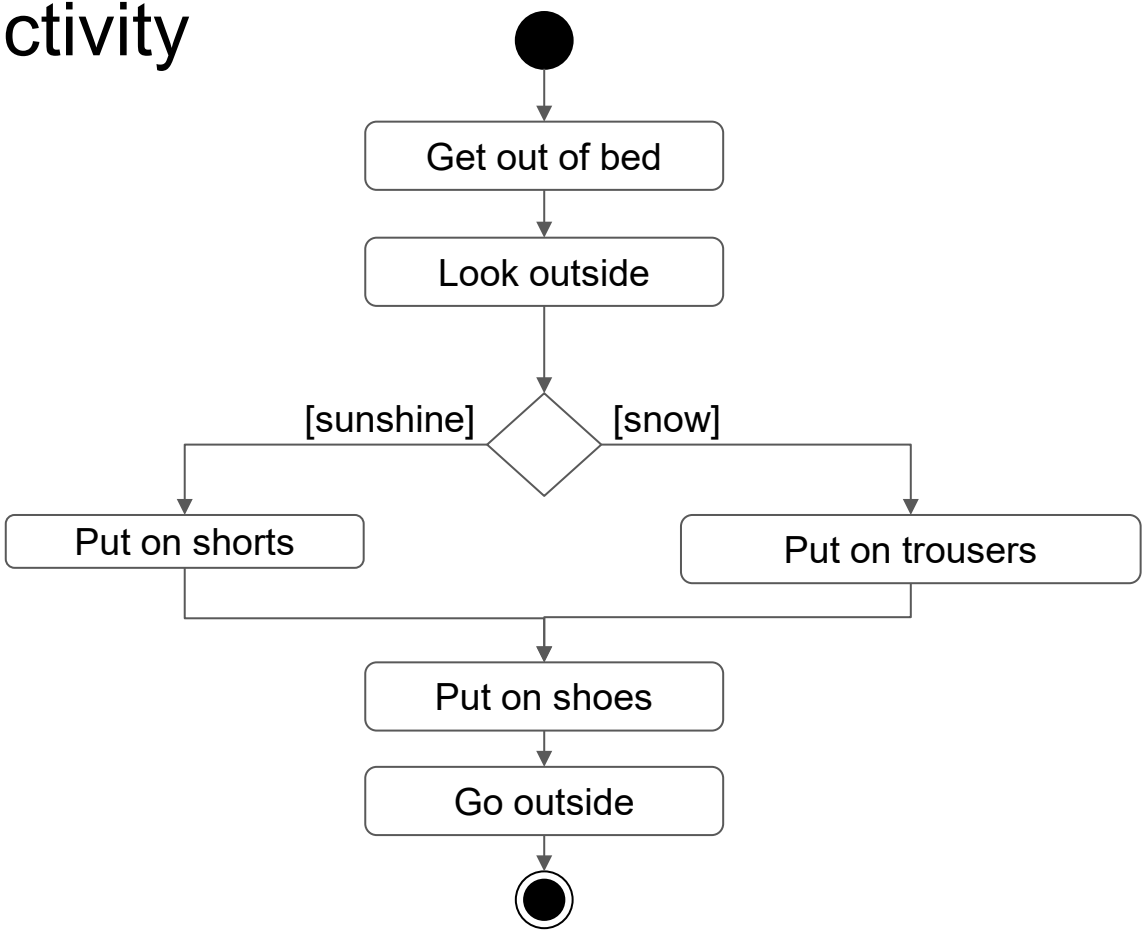
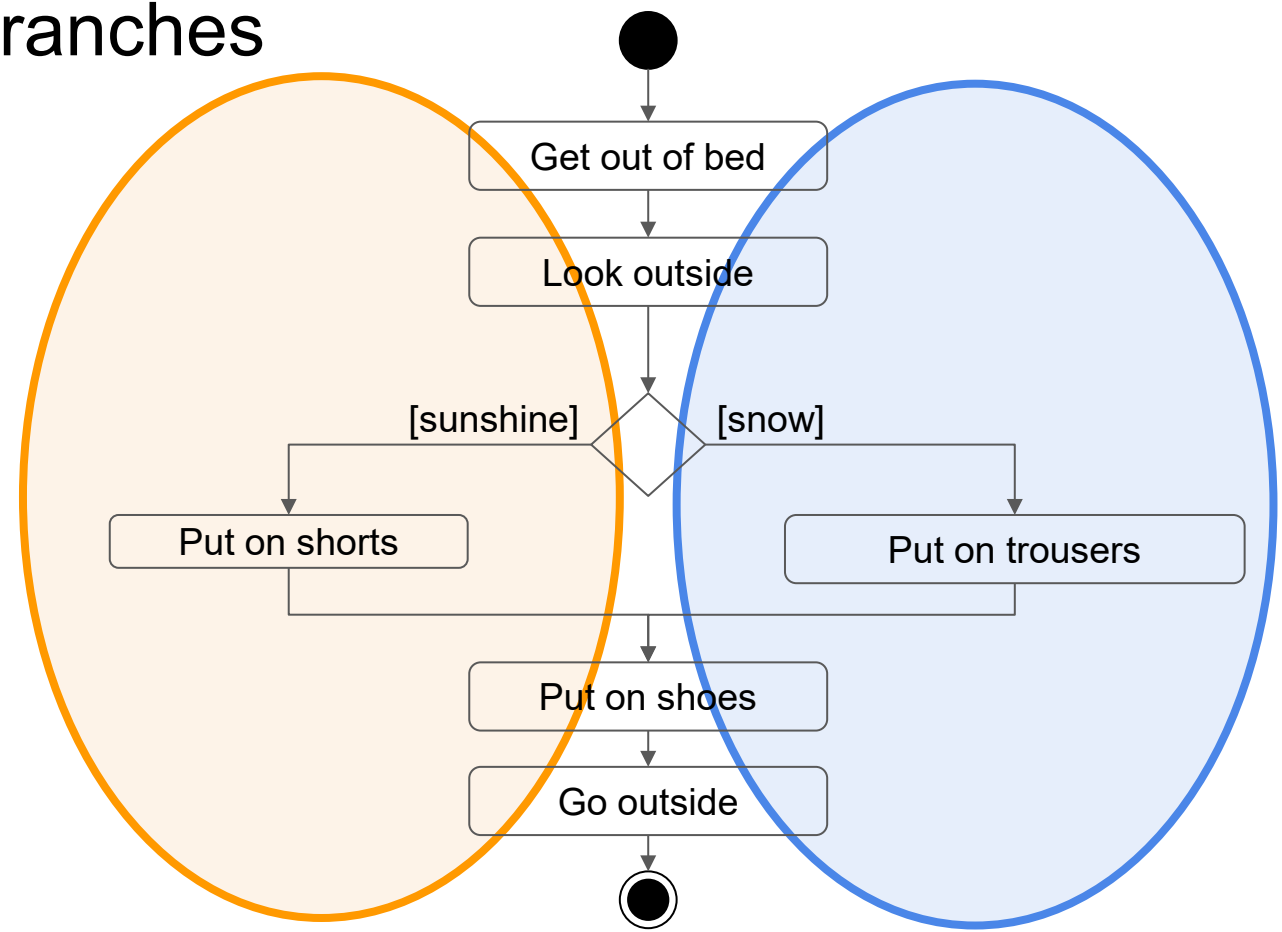


# Example of activity

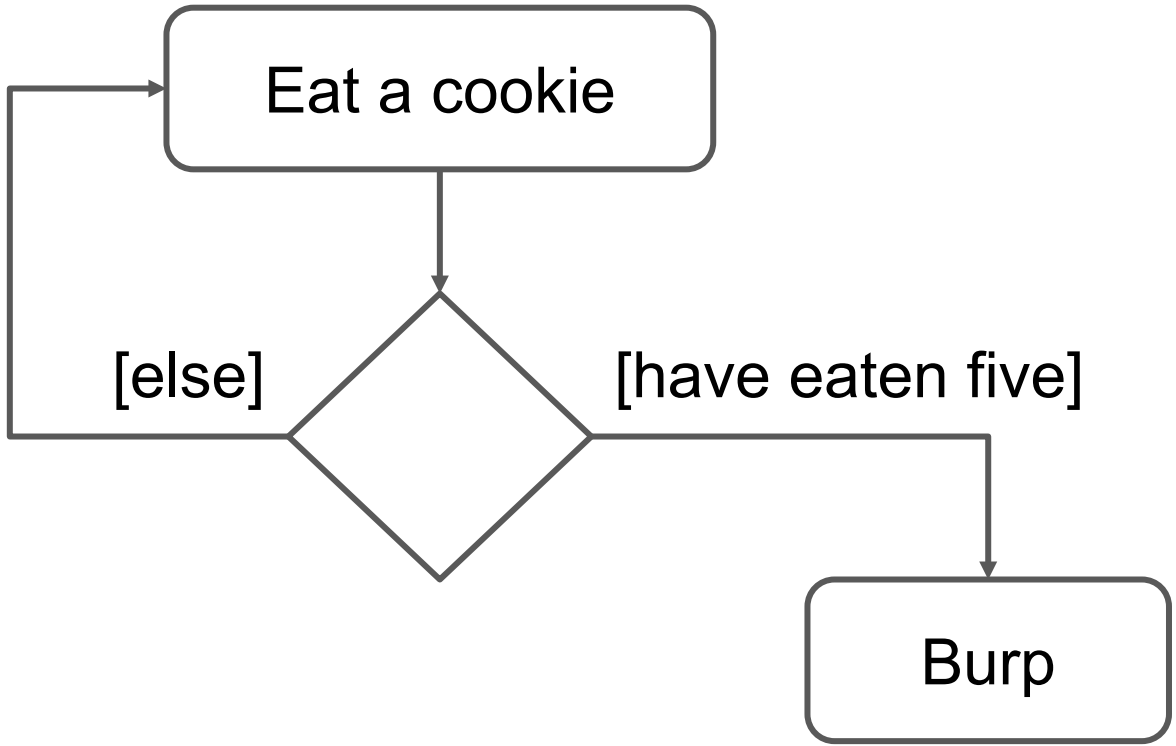


# The two branches



# Repetitions

Actions can only happen in the order the arrows are pointing. But you can have arrows pointing back to previous actions, so part of the activity repeats ...



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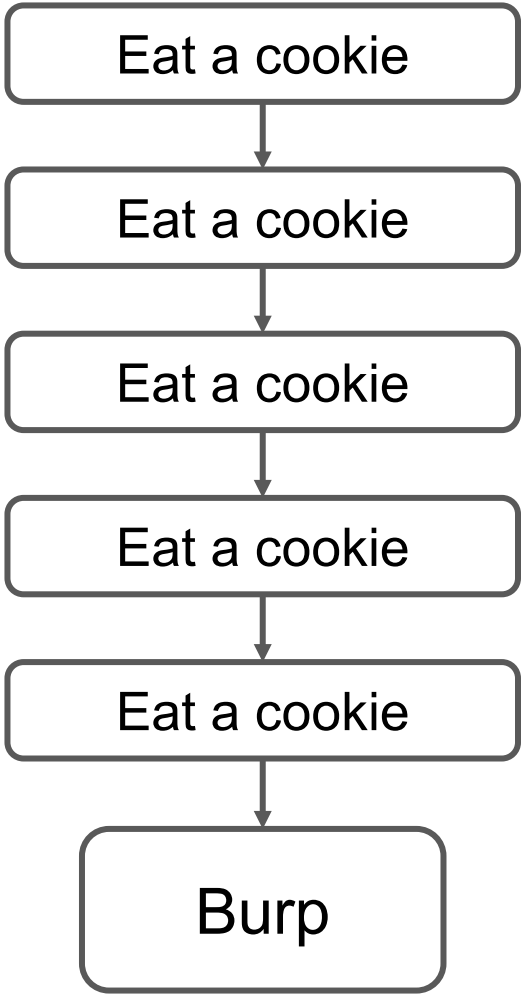

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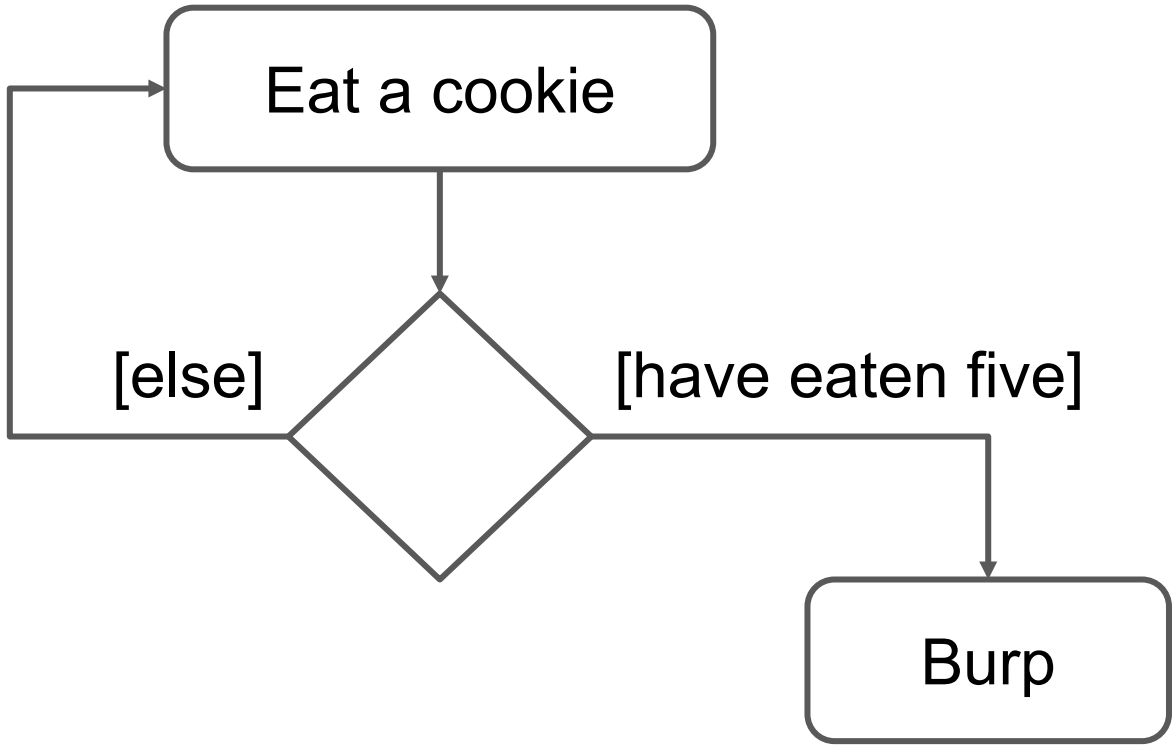
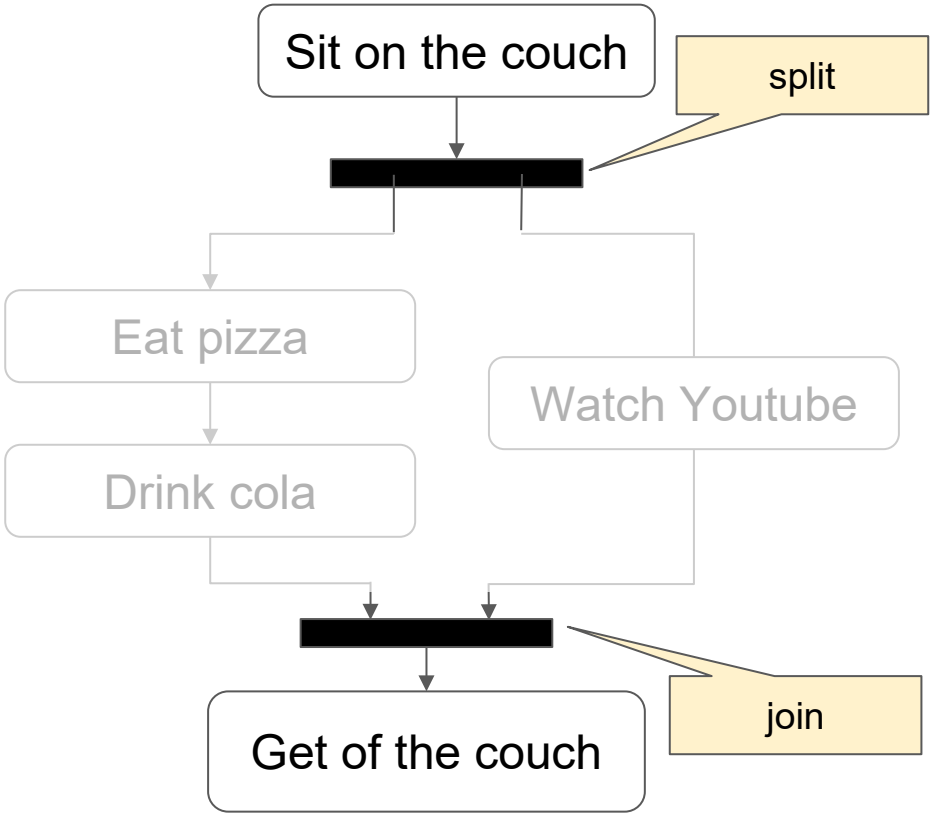


# Parallel actions

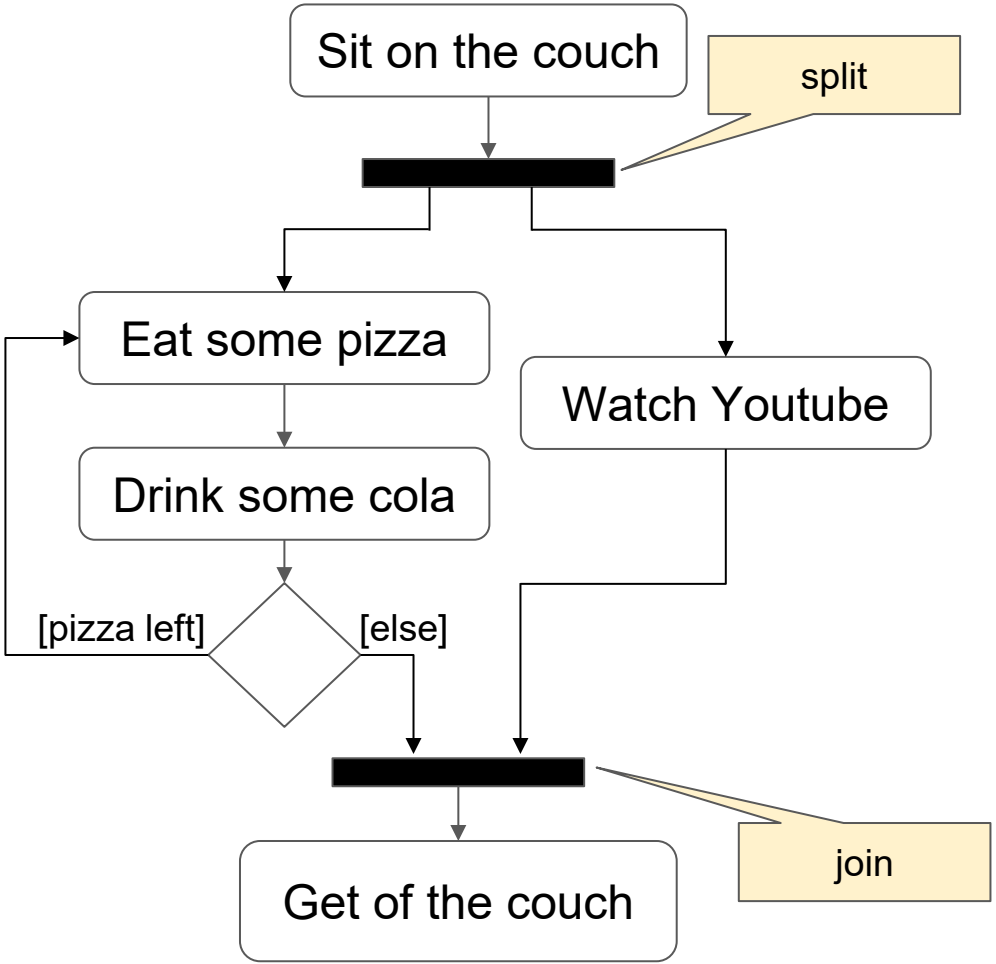
Multiple actions can be performed simultaneously – you just have to have a “split” before, and a “join” after, the parallel actions.



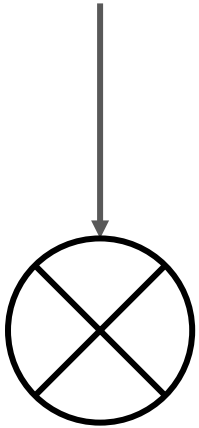
# Parallel actions

Multiple actions can be performed simultaneously – you just have to have a “split” before, and a “join” after, the parallel actions.

You can even have repetitions inside the split/join activity.



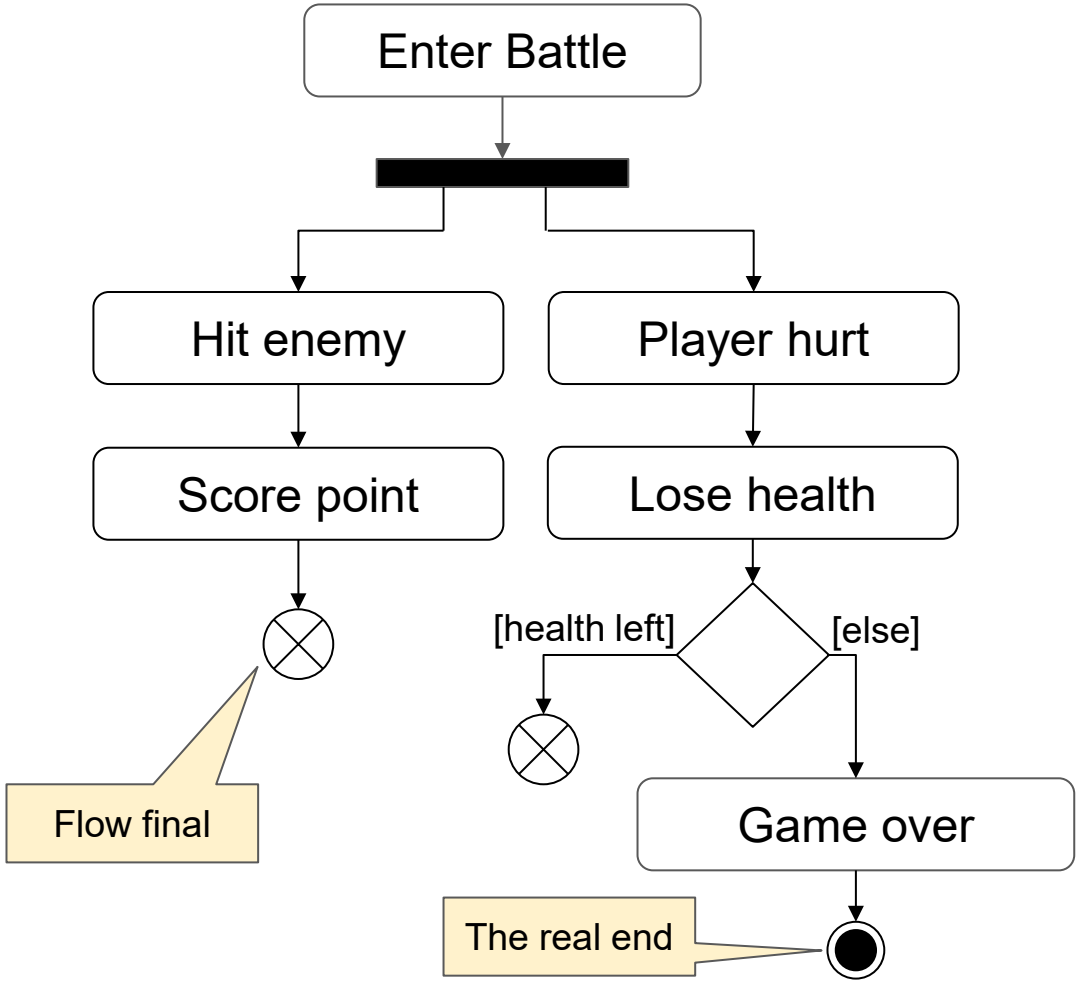
# Flow final



# Flow Final

You don't have to join after a split.
You can end the current "flow", with a **flow final** – this means that any parallel activities still continue.

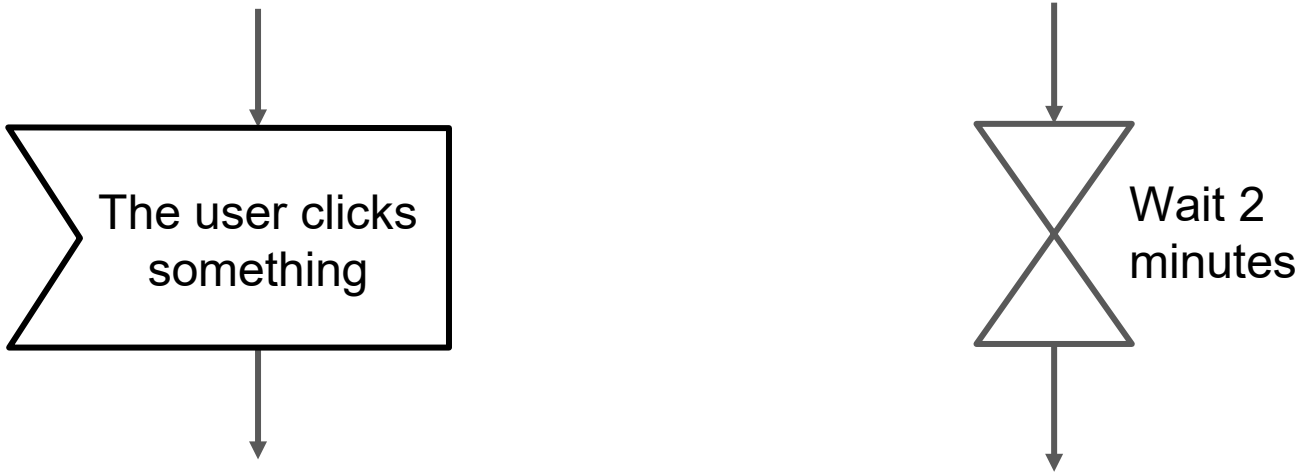
Only the **end**, ends everything!



# Signals

If you want to signal that an action is of a specific type, you can use other symbols than rounded rectangles.

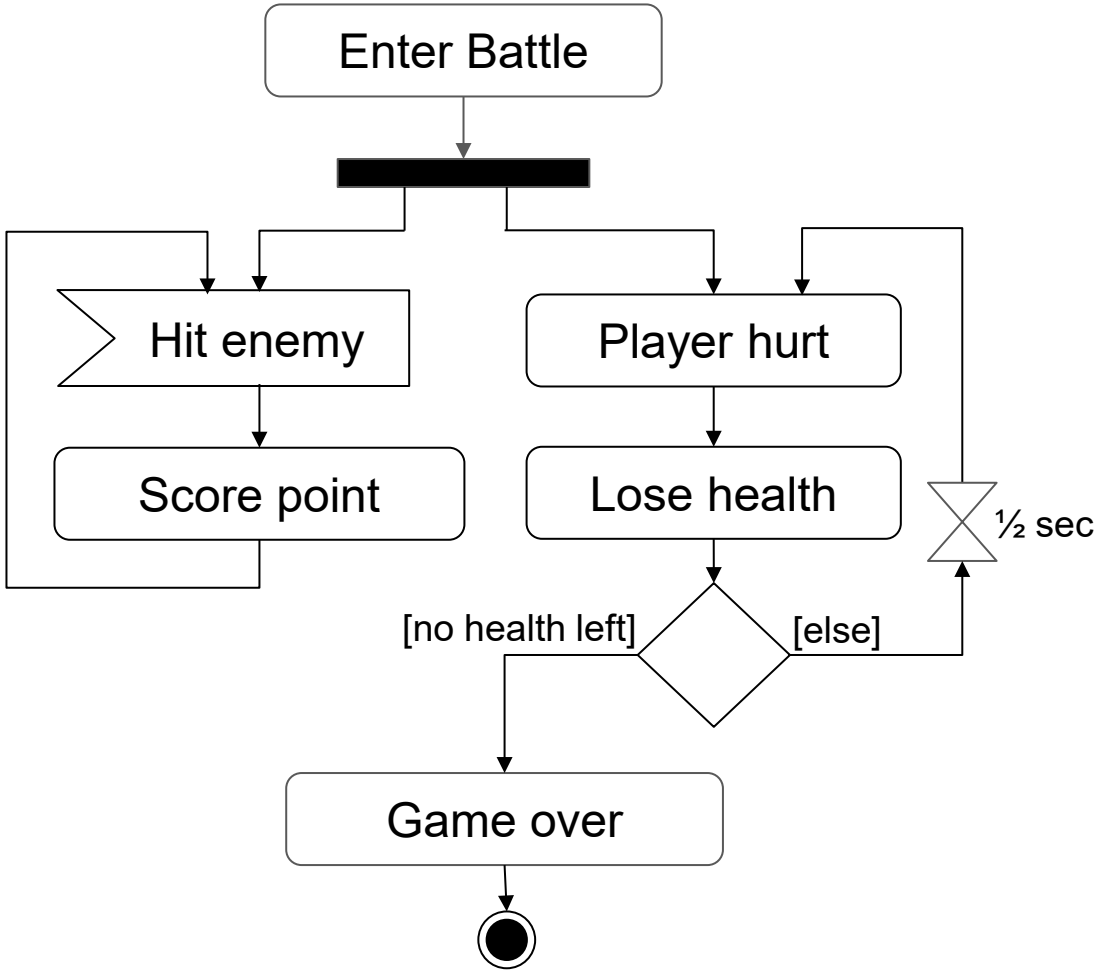
You can use the “flag” to show that the user does something to get the program going, or the “hourglass” to show that some sort of timer is involved



# Final example

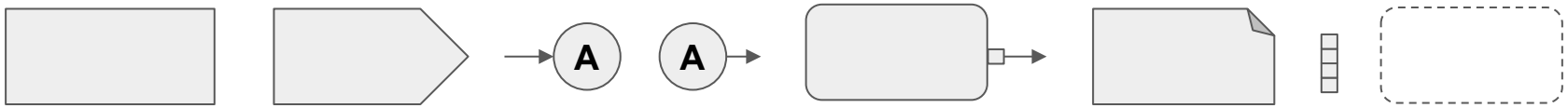
With the signal flags, it is clear that "hit enemy" and "player hurt" doesn't happen every time the battle repeats – but only when the thing happens in the game.

So it *can* repeat – but doesn't necessarily.



# That is activity diagrams

There are many more elements you can use …




But beyond “start” and “end” (initial and final) you can do almost everything with "action" and "decision". With an optional split and join when necessary – and signals for user input and time.

# How and why to use activity diagrams

Using a standardized diagram, helps your readers to quickly grasp the idea.

Diagrams gives a quick overview, and helps the reader to follow the flow.

They are supposed to help you gather and structure your thoughts.

There aren't *right* and *wrong* ways of drawing a diagram – the rules are to avoid misunderstandings, and help you find problems with your idea, long before implementing it.

Remember: Diagrams are intended to share ideas!

# How to draw activity diagrams

You can use any tool you would otherwise use for drawing lines and sketches.

I recommend paper and pencil for getting your initial thoughts down – pencil, so you can erase and modify the diagram.

If you draw on the computer, I recommend a tool for drawing diagrams, where you can attach arrows to boxes, and keep text inside boxes when moving them.

You get the best results if you sketch on paper, and then draw the final version on the computer – this also makes it easier to share, and get feedback.

Enjoy