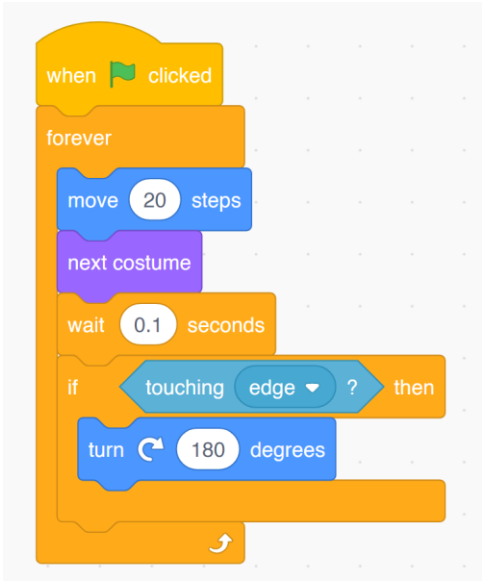
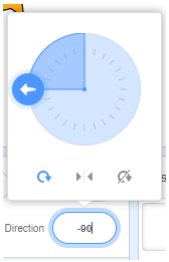
Worksheet - Scratch

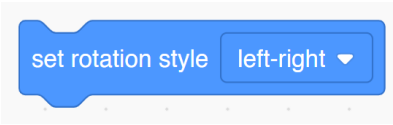
For each exercise, create a new project and save it regularly.

Exercice 1. Develop the following program and run it!



- What do you observer? Fix the issue by setting the direction possibility to left-right. You can do this visually or using the following code block:

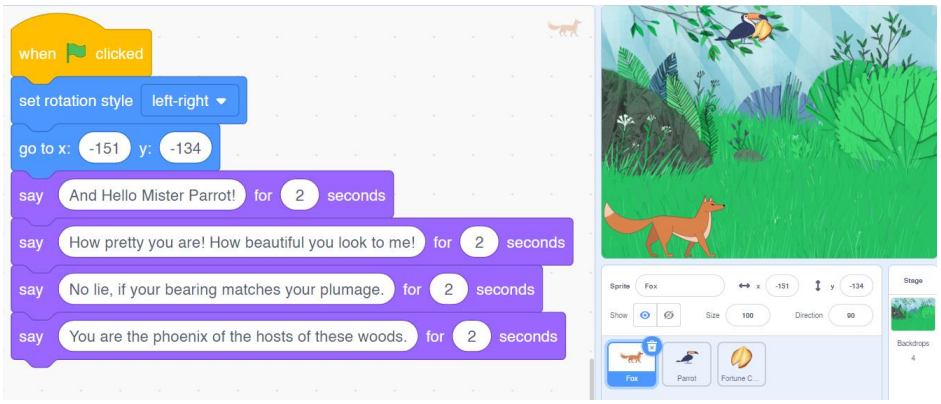




- Where would you put the code snippet?

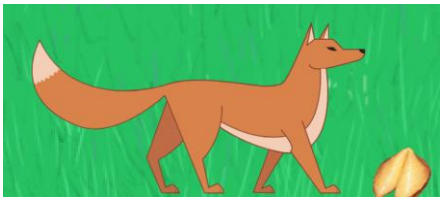
Exercice 2. Create a copy of your previous exercice and extend by a bear that does the exact same thing as the cat! Also add a safari-like background.

Exercice 3. Create the following stage setup:



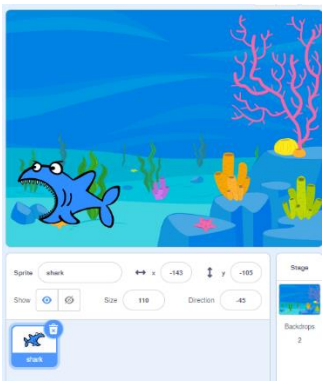
- In this task you have to give the parrot nice compliments so that he says thank you and drops the fortune cookie so that the fox can grab it!
- The parrot should drop the fortune cookie after the last compliment by answering "Thank you".

- Then the fox should go and get it.



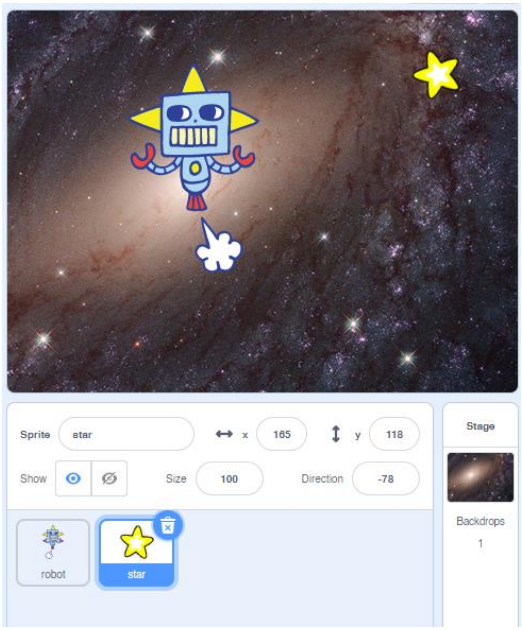
- Then the parrot should get upset and fly away.

Exercice 4. Create the stage setup as depicted in the right picture. In this task, you shall be able to control a shark using the arrow keys. The shark should look change his animation and look in the right direction every time he moves. One movement should be 10 pixels.



- Extend the exercise with two more keys: When the user presses “a” the shark shall grow by 5%. When the user presses “s” he shall shrink by 5%. Remember to reset the size every time you restart the game!

Exercice 5. Create the following stage setup:



- In this task you have to move a robot and a star to randomly selected positions.
- If the robot catches the star, it should visually represent this using a message.
- The robot should glide to the random position whereas the star should teleport every 2 seconds to a random position.
- **Extension**: Adopt your solution such that the robot tries to follow the star instead of moving to a random position.

Exercice 6. **[Optional]** Create the following stage setup as depicted in the right picture. In this task you have to catch falling apples using a basket. Only 1 apple can fall at a time. If the apple is caught, a suitable message should appear and the apple should fall again from above at a new random position. The same should happen if you miss the apple, but with a different message.