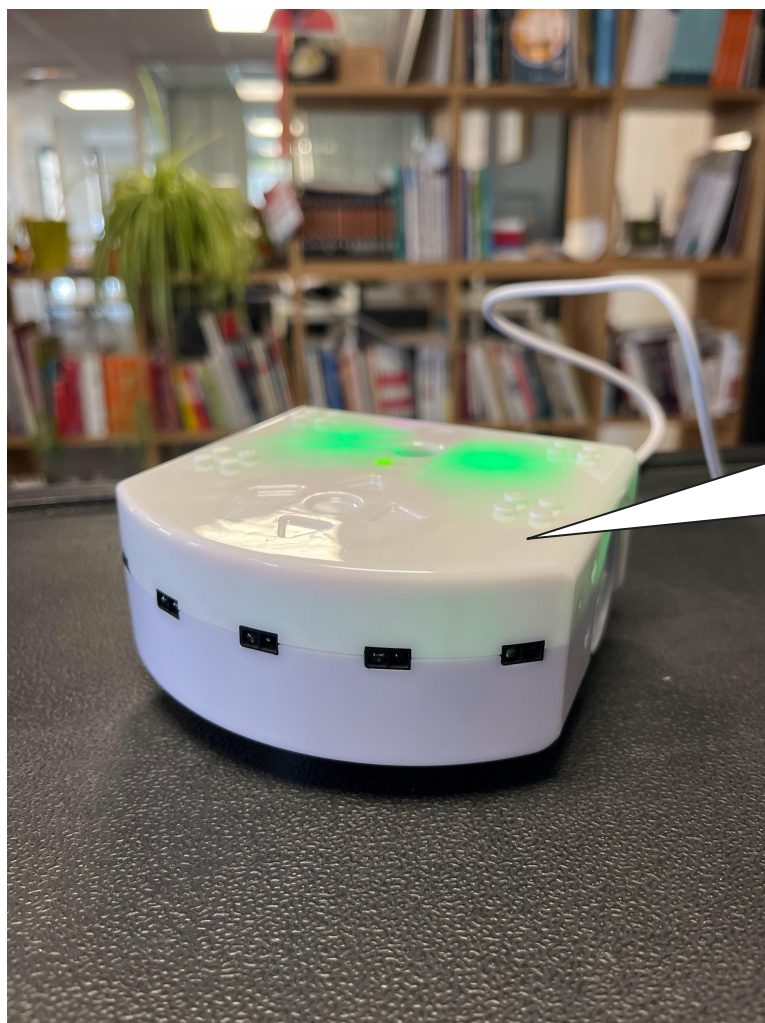




zenika

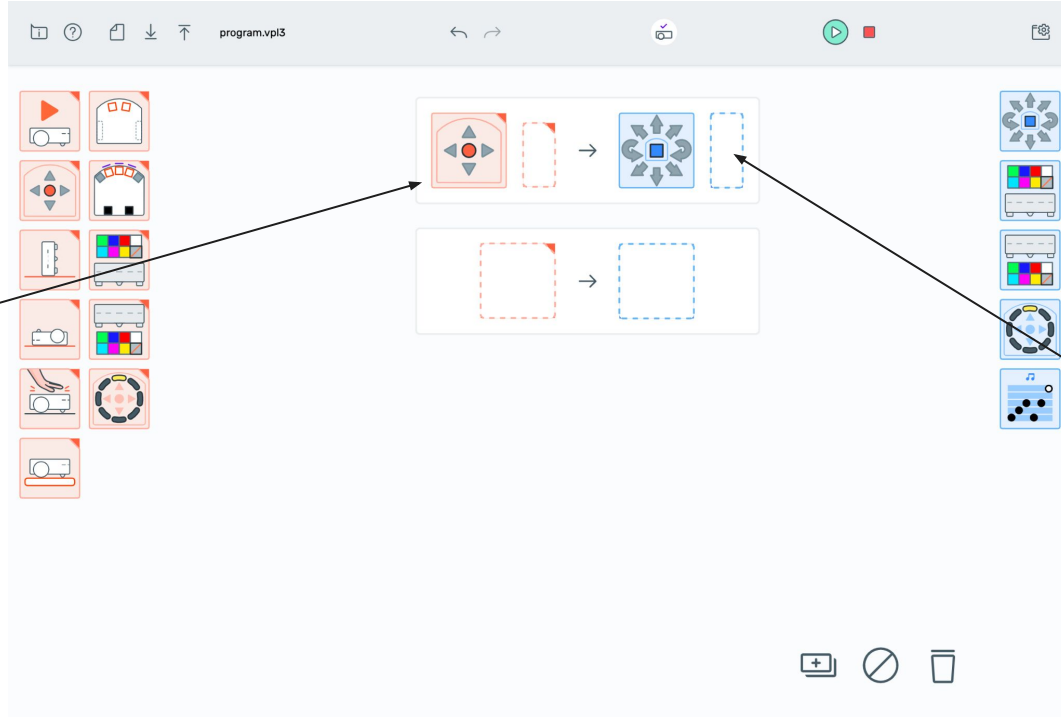
Thymio



Bonjour !
Je suis un
robot Thymio

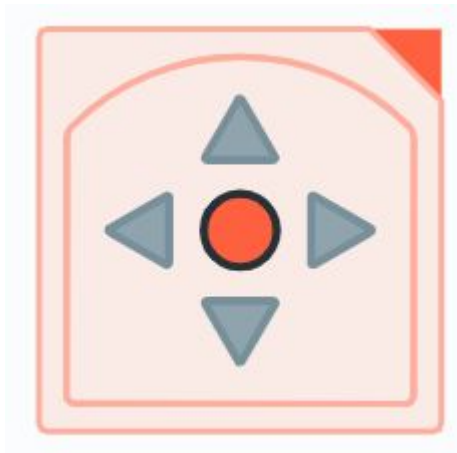
L'interface du logiciel

Évènement

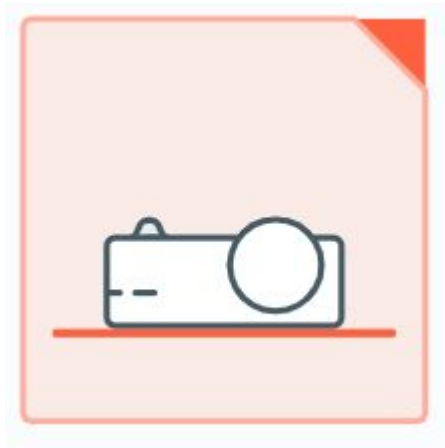


Action

Évènements



Si l'on appuie sur le bouton orange



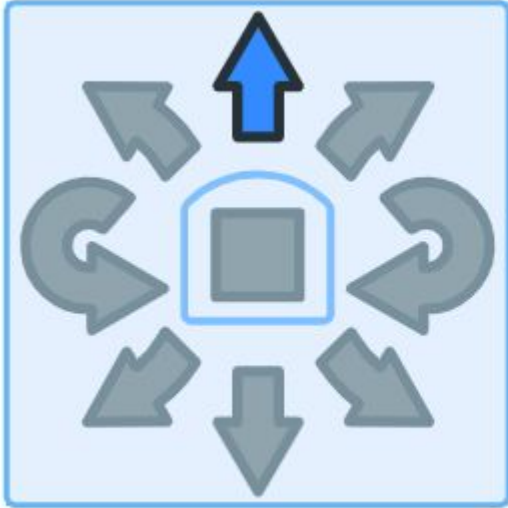
Si l'on met le robot sur le dos



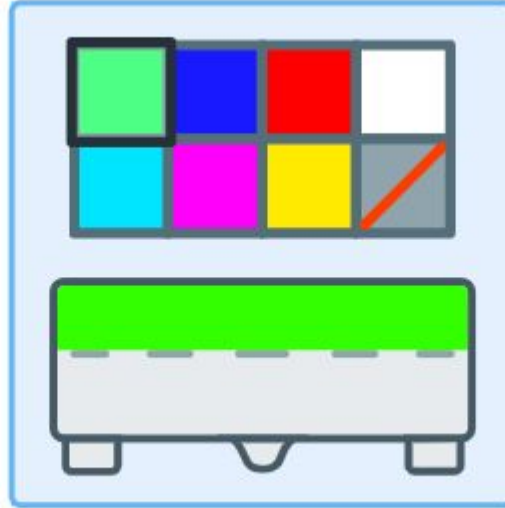
Si le capteur détecte ou pas un obstacle :

- Case noire = libre
- Case blanche = obstacle

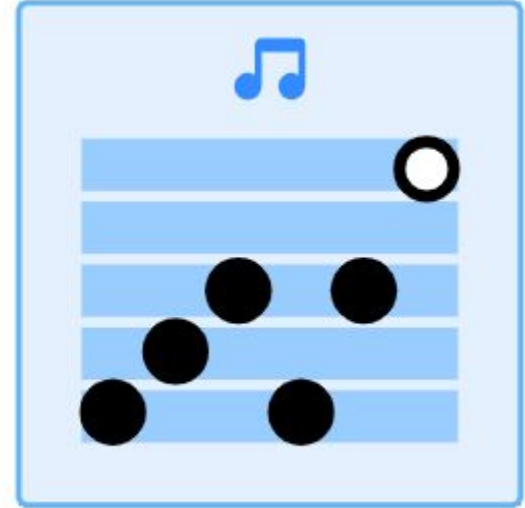
Actions



Modifier la direction du robot (flèche en bleu)

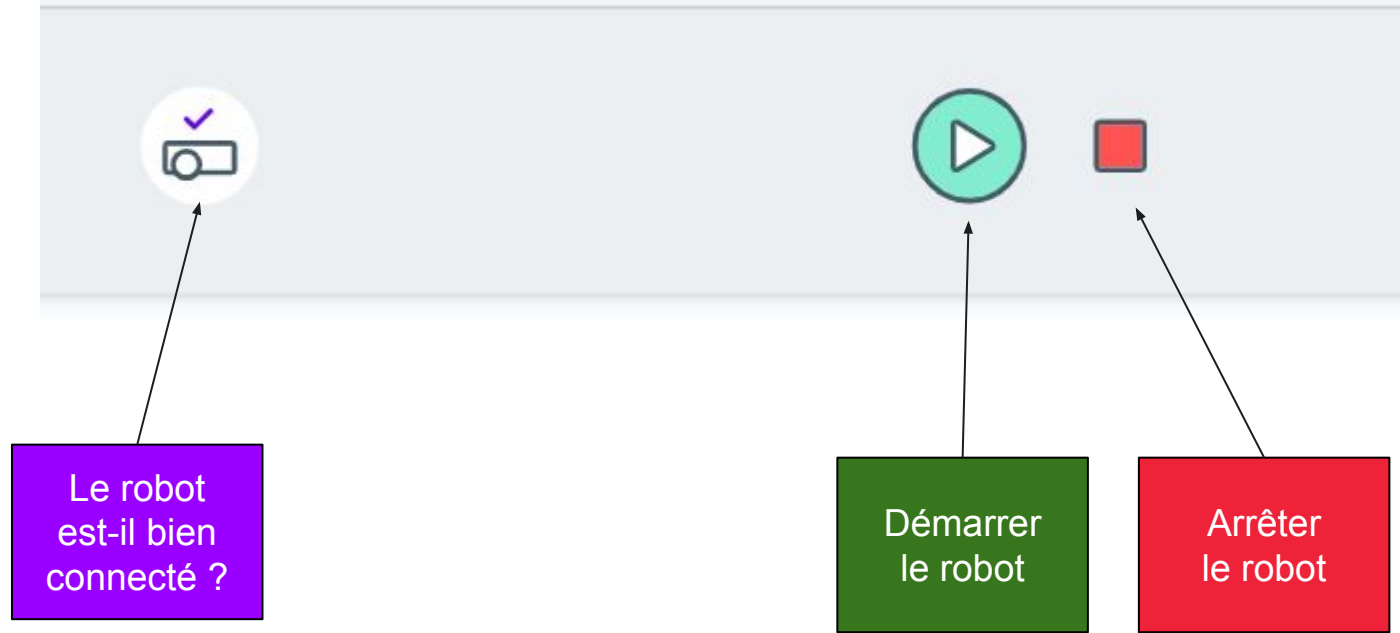


Changer la couleur du robot



Jouer de la musique (cliquer pour changer les notes)

Exécuter le code sur le robot



Exercice 1 : Avancer

Si Flèche vers le haut

Alors

Avancer tout droit

Changer la couleur du robot

Jouer une musique

Si Robot sur le dos

Alors

Arrêter le robot

Supprimer la couleur

Exercice 1 : Solution

The image displays two rows of a visual puzzle solution. Each row consists of a sequence of icons:

- Row 1:**
 - Starts with a source icon (a square with a red border, a white background, and a red triangle at the top) and a dashed target icon (a square with a red border and a white background).
 - Followed by an arrow pointing right.
 - Then four intermediate icons in a row:
 - A square with a blue border and a white background, containing a blue square in the center and eight grey arrows pointing outwards.
 - A square with a blue border and a white background, containing a 2x2 grid of colored squares (green, blue, red, yellow) and a grey square with a diagonal line.
 - A square with a blue border and a white background, containing a musical staff with a blue note and five black dots.
 - A square with a blue border and a white background, containing a dashed line and a white background.
- Row 2:**
 - Starts with a source icon (a square with a red border, a white background, and a white camera icon) and a dashed target icon (a square with a red border and a white background).
 - Followed by an arrow pointing right.
 - Then four intermediate icons in a row:
 - A square with a blue border and a white background, containing a blue square in the center and eight grey arrows pointing outwards.
 - A square with a blue border and a white background, containing a 2x2 grid of colored squares (green, blue, red, yellow) and a grey square with a diagonal line.
 - A square with a blue border and a white background, containing a musical staff with a blue note and five black dots.
 - A square with a blue border and a white background, containing a dashed line and a white background.

Exercice 2 : Diriger

Si Flèche vers la droite

Alors

Tourner à droite

Changer de couleur du robot

Si Flèche vers la gauche

Alors

Tourner à gauche

Changer de couleur du robot

Si Flèche vers le bas

Alors

Reculer

Changer de couleur du robot

Si Bouton du milieu

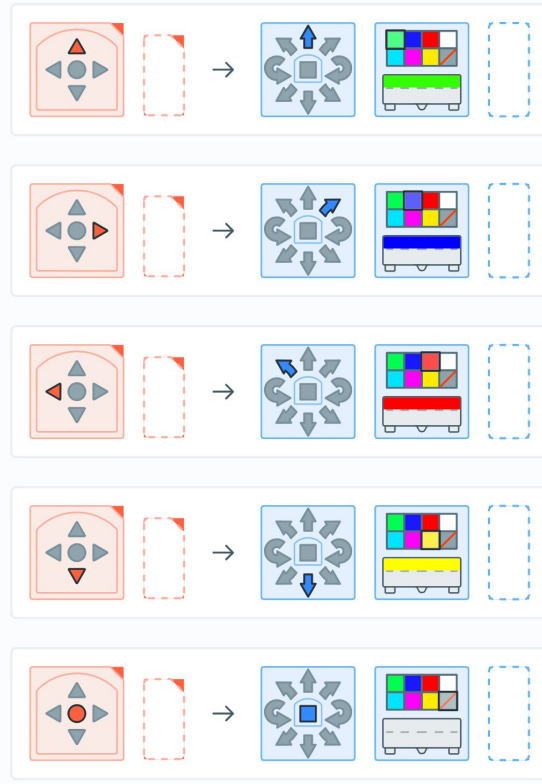
Alors

Arrêter

Eteindre la couleur du robot

Garder la règle pour arrêter le robot

Exercice 2 : Solution



Exercice 3 : Me suivre

Utilisation du capteur :

lorsqu'il détecte un obstacle devant (main), il se dirige vers l'obstacle.

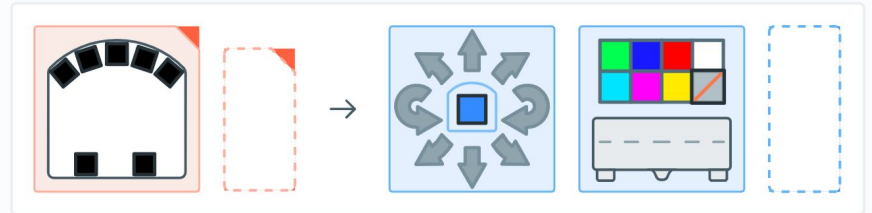
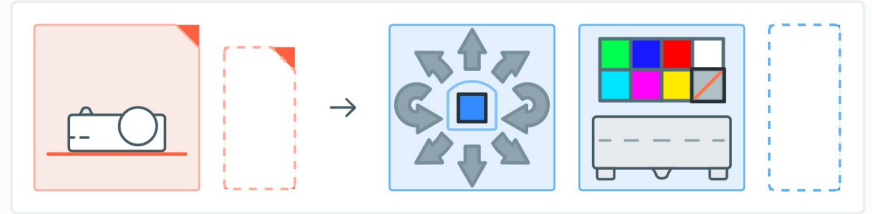
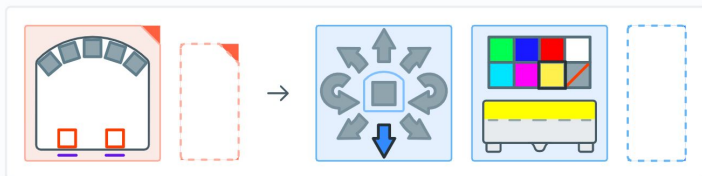
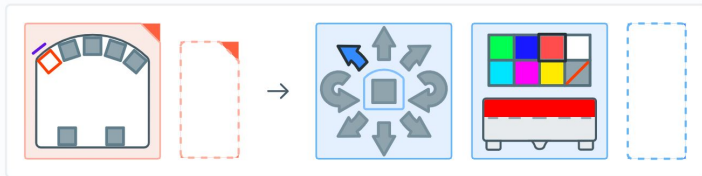
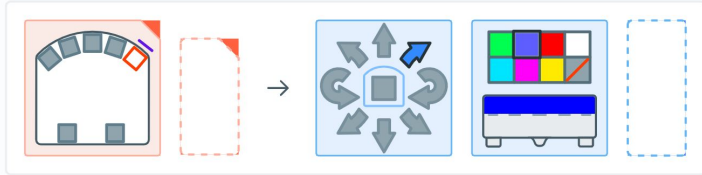
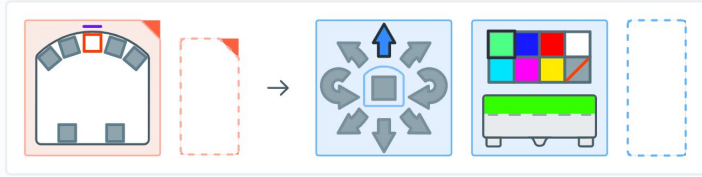
On peut ainsi diriger notre robot en utilisant ses mains.



Si le carré est blanc avec des bords orange, détecte un obstacle

Si le carré est noir, détecte qu'il n'y a pas d'obstacle

Exercice 3 : Solution



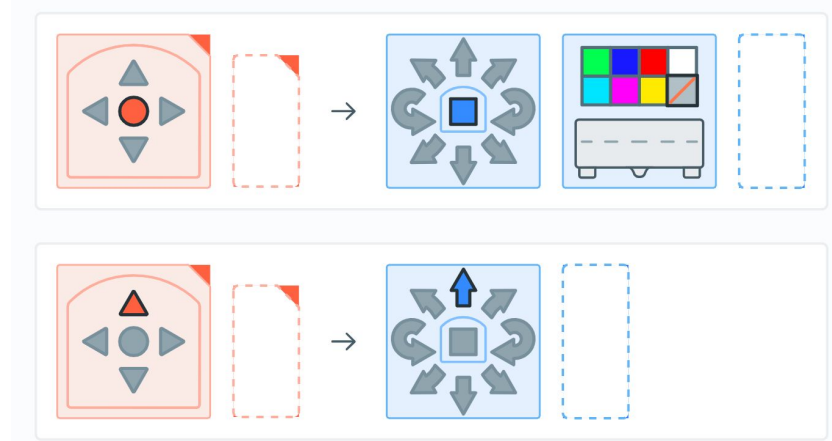
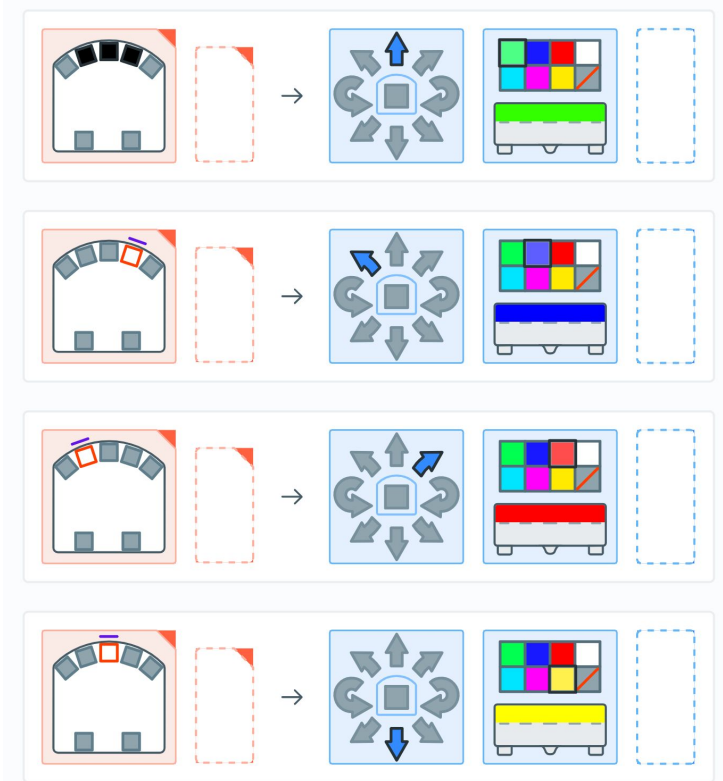
Exercice 4 : Parcours d'obstacles

But : le robot doit parcourir automatiquement un parcours en évitant les obstacles, il doit donc avancer tout seul.

**Si on détecte un obstacle, on tourne pour l'éviter (réfléchir à quel sens !).
Sinon on avance si l'espace est libre devant.**

Utiliser un bouton pour commencer à avancer et pour arrêter.


Exercice 4 : Solution

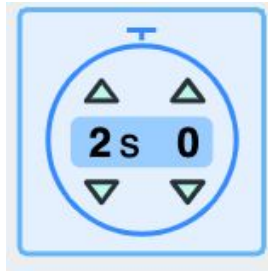


Exercice 4 bis : Reculer pour contourner

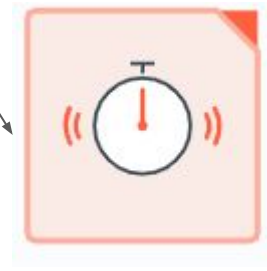
But : si obstacle, reculer en tournant dans le sens inverse pendant un certain temps, puis avancer.

Il est nécessaire d'ajouter un minuteur. Quand le minuteur expire => avancer.

(option à ajouter en cliquant sur  en haut à droite de l'écran, puis en cochant les icônes de minuteur : Démarrer un minuteur et Évènement régulier)



Action qui démarre
un minuteur de 2s



Évènement
qui expire

Exercice 4 bis : Reculer pour contourner

The image displays four rows of icons, each representing a step in a logic puzzle. Each row consists of the following elements from left to right:

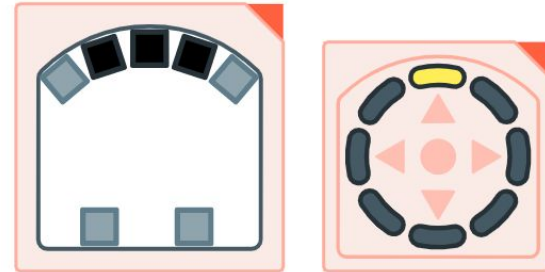
- Row 1:** A square icon with a red border containing a black arch with five teeth and two grey blocks below. To its right is a dashed red square. An arrow points to a blue square icon with a central square and eight arrows pointing outwards (up, down, left, right, and four diagonals). To its right is a dashed blue square.
- Row 2:** A square icon with a red border containing a black arch with five teeth, the top-left tooth is highlighted in red. To its right is a dashed red square. An arrow points to a blue square icon with a central square and eight arrows pointing outwards, with a blue arrow pointing to the bottom-left arrow. To its right is a circular timer icon with a '2s 0' display and four triangles (up, down, left, right) around the display. To its right is a dashed blue square.
- Row 3:** A square icon with a red border containing a black arch with five teeth, the top-right tooth is highlighted in red. To its right is a dashed red square. An arrow points to a blue square icon with a central square and eight arrows pointing outwards, with a blue arrow pointing to the bottom-right arrow. To its right is a circular timer icon with a '2s 0' display and four triangles (up, down, left, right) around the display. To its right is a dashed blue square.
- Row 4:** A square icon with a red border containing a white clock face with a vertical hand pointing to the top and two red curved lines on either side. To its right is a dashed red square. An arrow points to a blue square icon with a central square and eight arrows pointing outwards. To its right is a dashed blue square.

Exercice 5 bonus : Parcours d'obstacles

Utiliser le bouton et un état pour démarrer l'action (et pour arrêter)



Activer un état
(lumière jaune)



Si le capteur est libre et le robot est dans l'état activé, alors l'action se déclenche.

Exercice 5 bonus : Solution

Four rows of visual puzzles, each on a light gray background. Each row consists of three input icons followed by an arrow and three output icons.

- Row 1: A white arch with a black top and two black feet; a circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a printer with a multi-colored tray; a blue dashed rectangle.
- Row 2: A white arch with a red top and two black feet; a circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a printer with a blue tray; a blue dashed rectangle.
- Row 3: A white arch with a red top and two black feet; a circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a printer with a red tray; a blue dashed rectangle.
- Row 4: A white arch with a red top and two black feet; a circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a printer with a yellow tray; a blue dashed rectangle.

Four rows of visual puzzles, each on a white background. Each row consists of three input icons followed by an arrow and three output icons.

- Row 1: A printer with a white tray; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a printer with a multi-colored tray; a circular icon with a blue center and black dots; a blue dashed rectangle.
- Row 2: A circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a circular icon with a blue center and black dots; a blue dashed rectangle.
- Row 3: A circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a blue square with eight arrows pointing outwards; a blue dashed rectangle.
- Row 4: A circular icon with a red center and black dots; a circular icon with a red center and black dots; a red dashed rectangle. Arrow points to: a circular icon with a blue center and black dots; a blue square with eight arrows pointing outwards; a blue dashed rectangle.