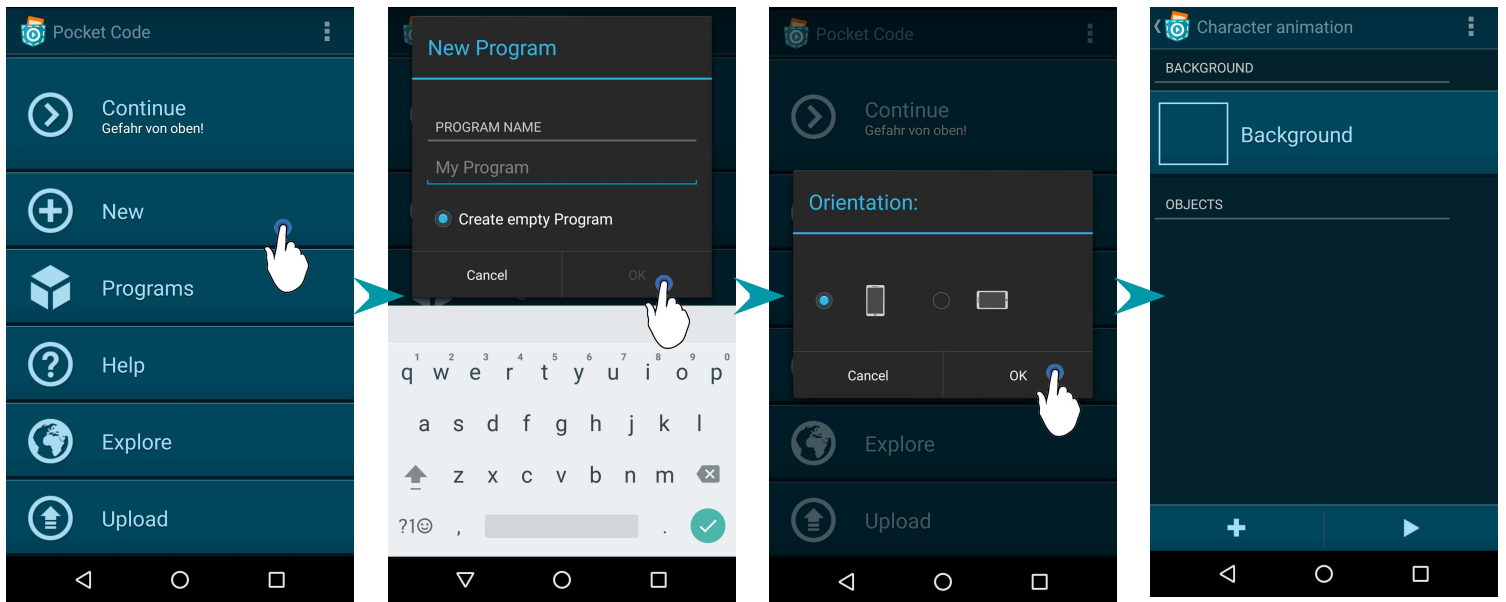
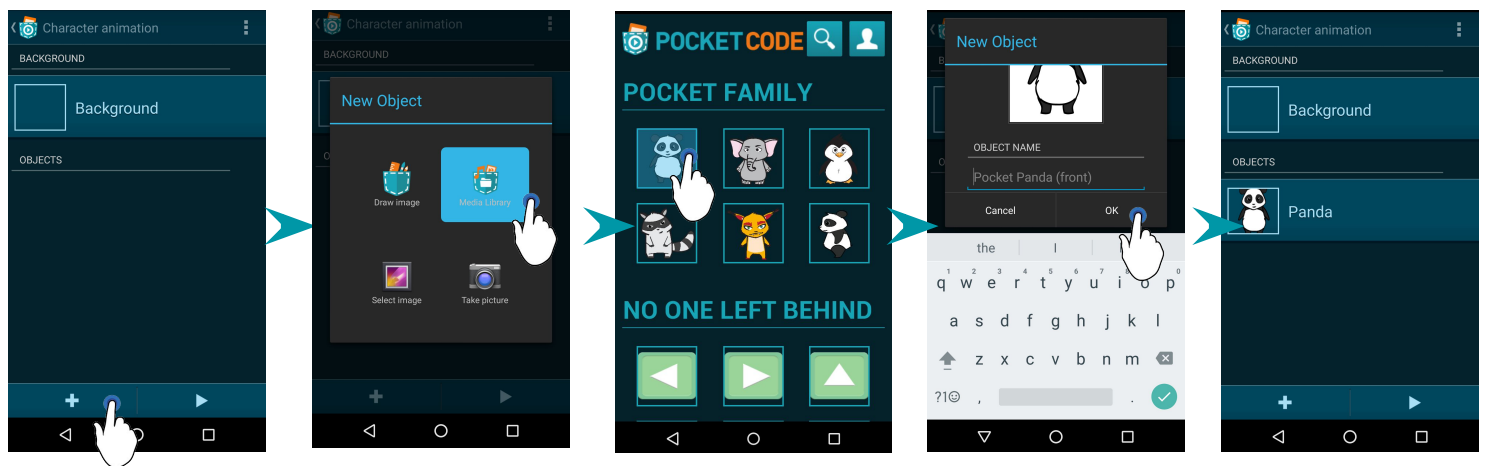


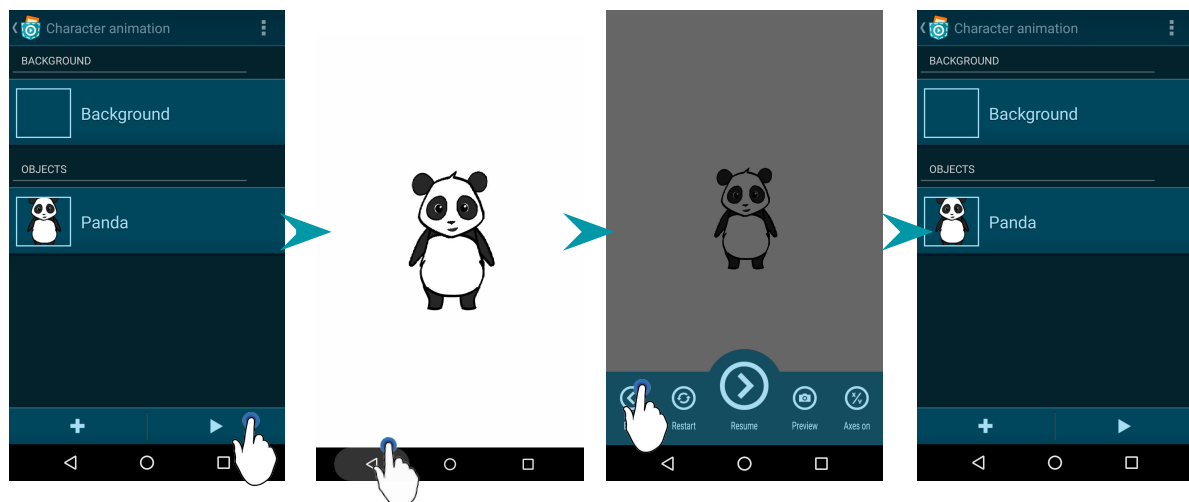
# 1) How do I create a new program?



# 2) How do I add a new object?



# 3) How do I start my program?



## 4) How do I place my object on the stage?

Create a new program. In this game you need one new object. This will be placed at a specific location within the coordinate system.

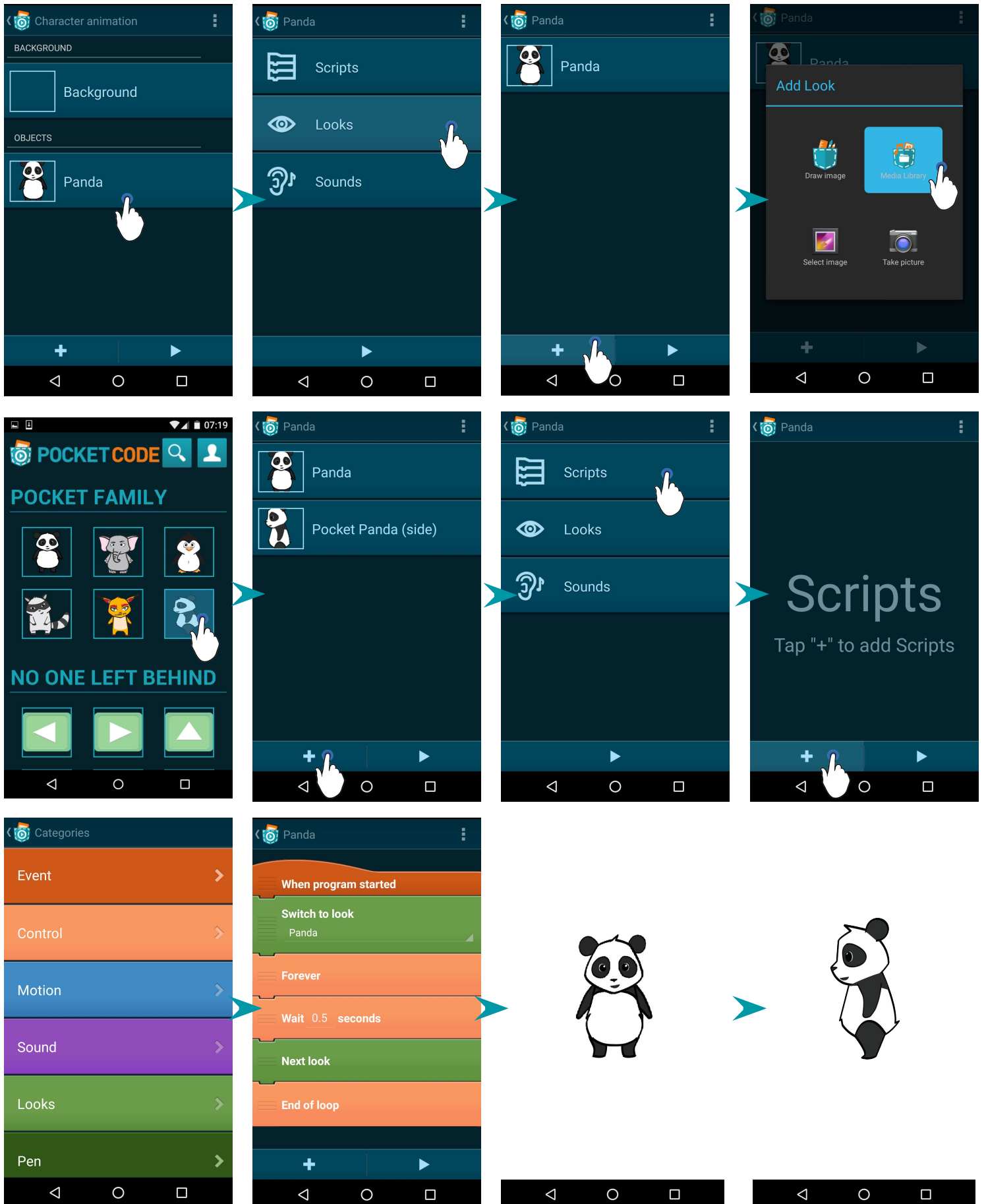
By using **values for X and Y** you can choose the position of your object.

The coordinate system is similar to a football field, you can place every player/object on a certain position. **If you do not specify this position** the object will be placed automatically on **X=0** and **Y=0**. This position is the **midpoint** of the stage.

**EXPLANATION**

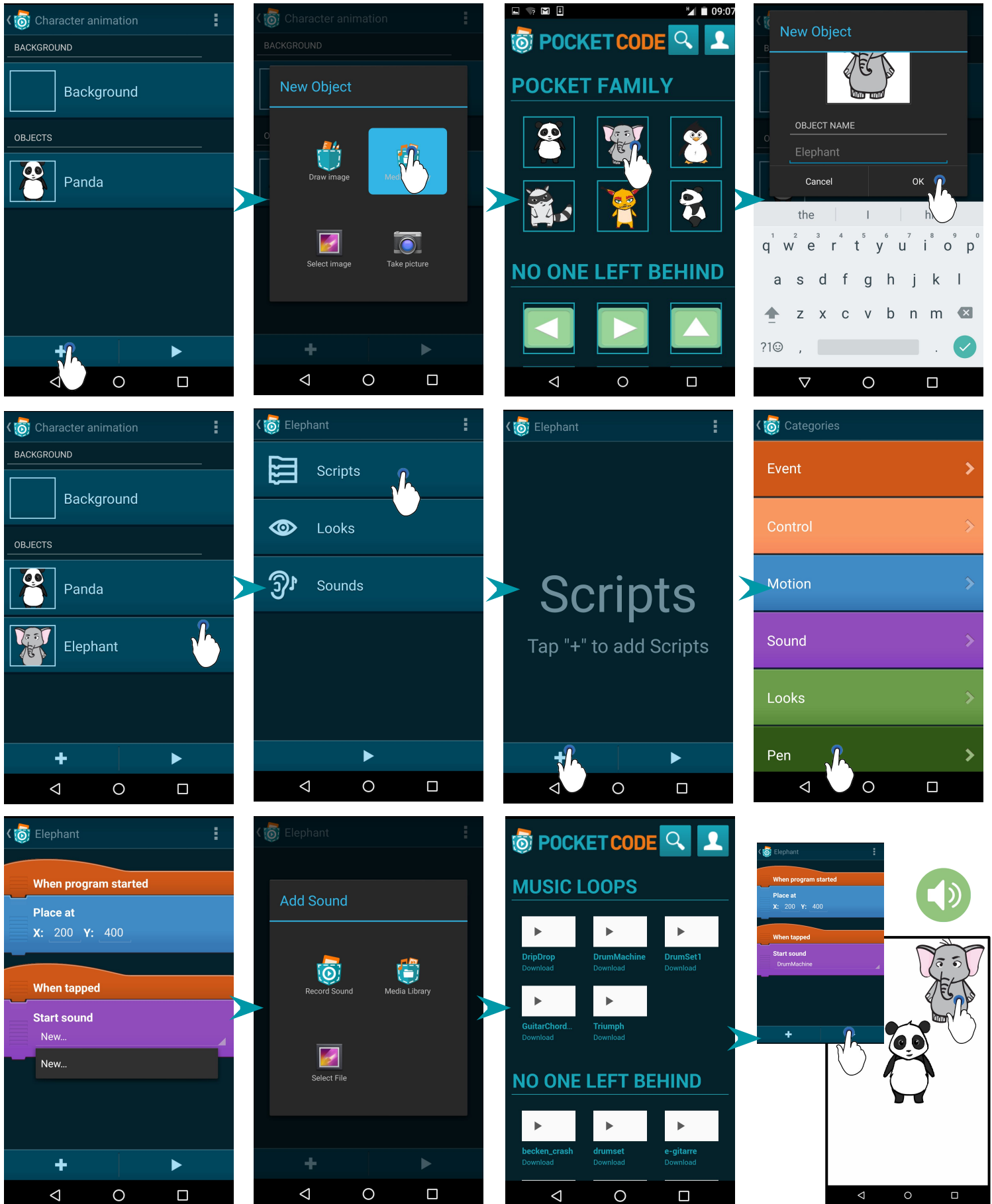
## 5) How do I animate my object?

Create a new program. In this game you need a new object with two looks, which then change continuously.



## 6) How do I add a sound?

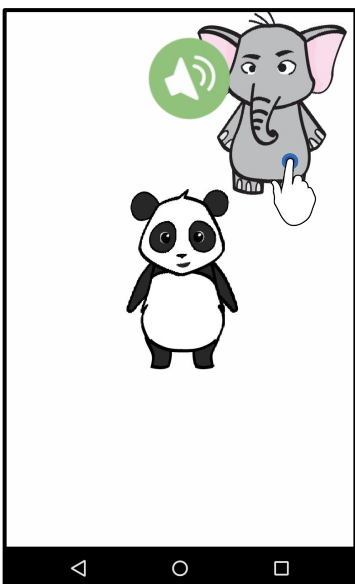
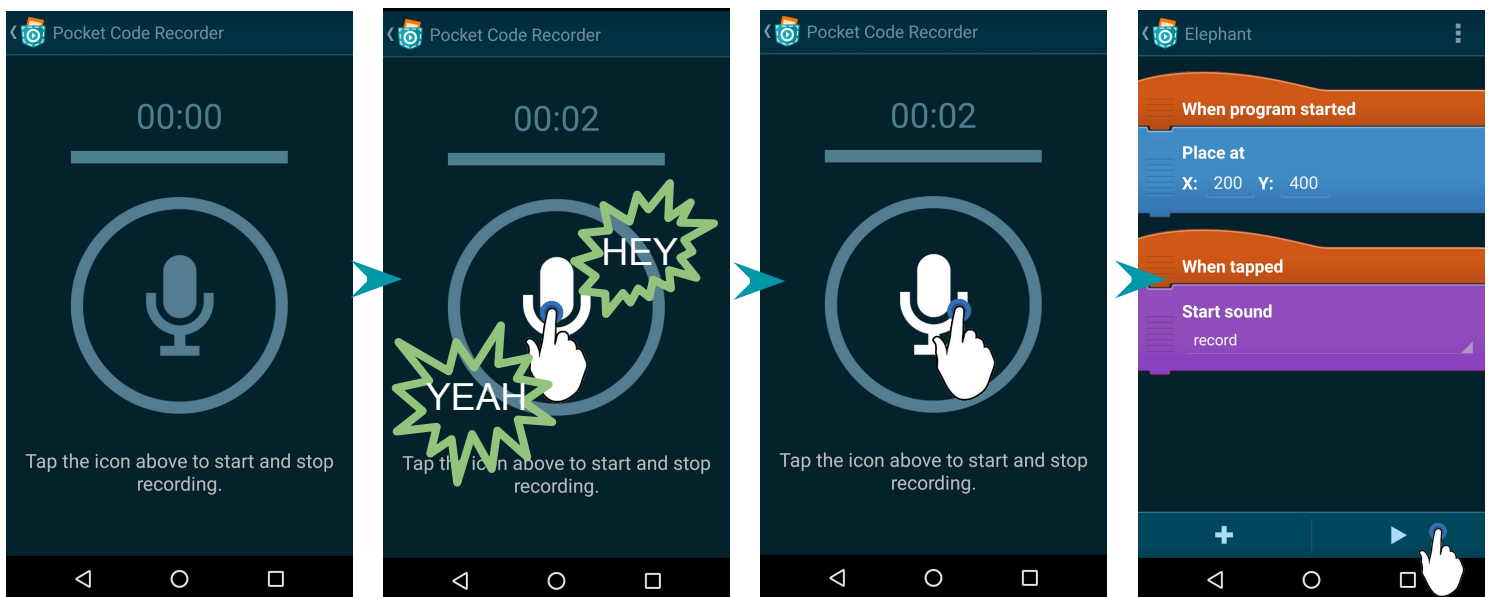
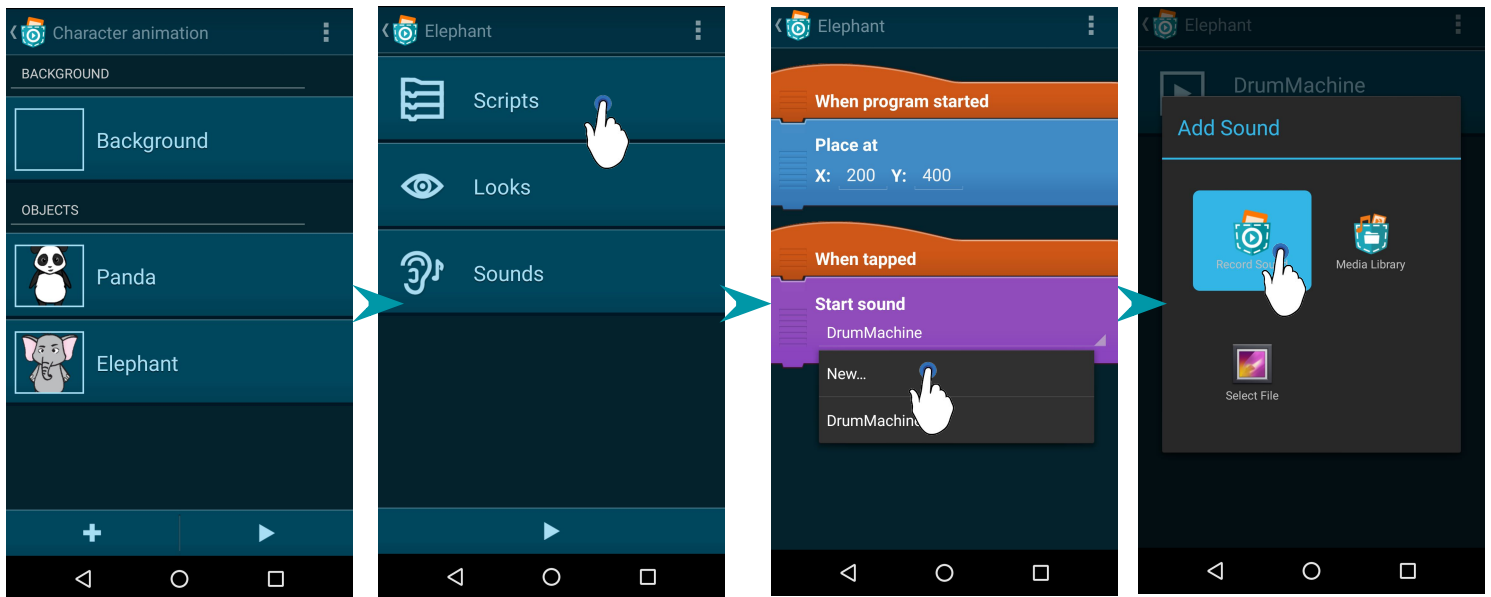
Create a new program. Add a new object. The new object should play a sound when tapping it.





## 7) How can I record my own sound?

Instead of downloading and playing a finished sound, you can record it yourself. We show you how to do it!



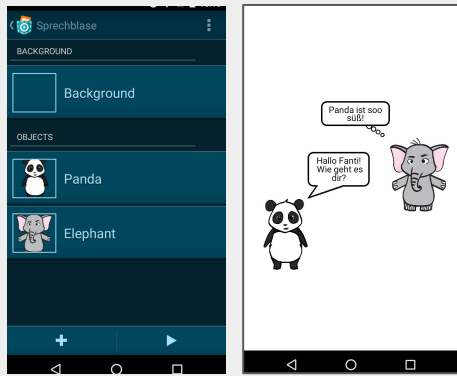
### Start sound and wait

DrumMachine

You can also use the *start sound and wait* - Brick instead of the *start sound* Brick. This brick waits until the end of the recording and only then executes the attached bricks.

**TIP!**

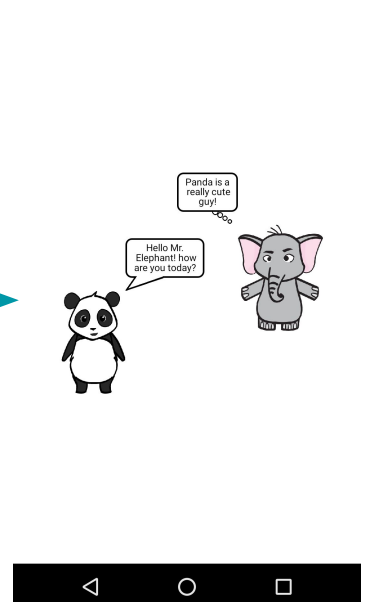
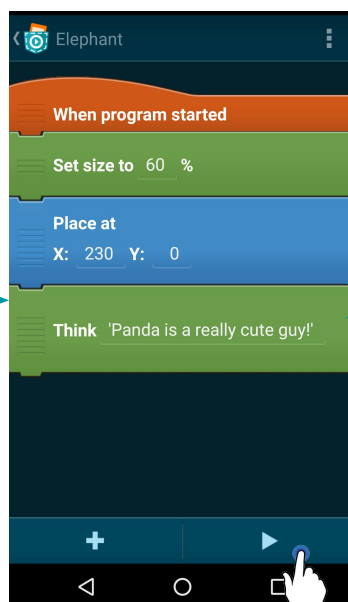
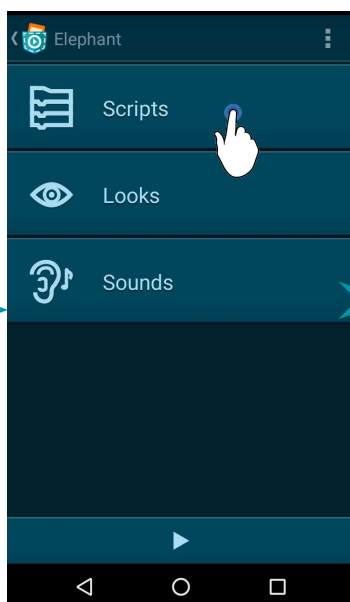
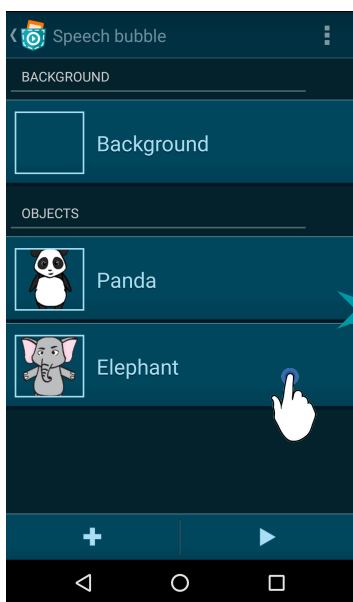
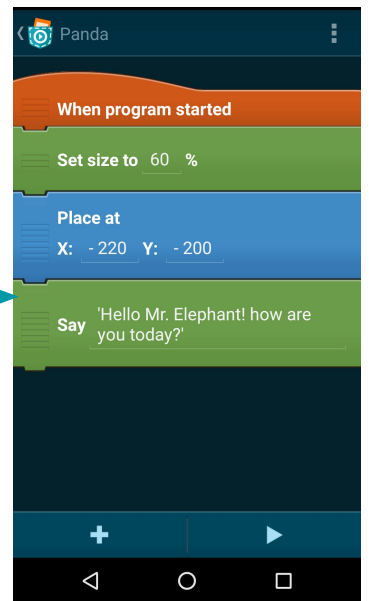
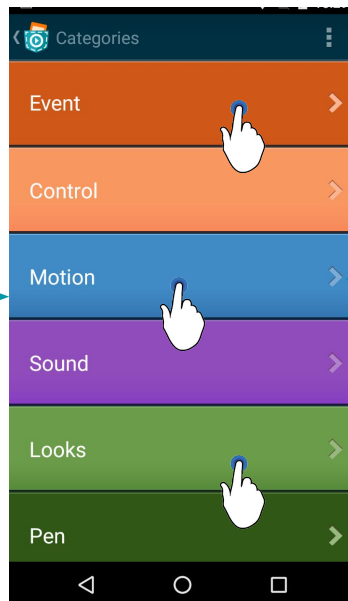
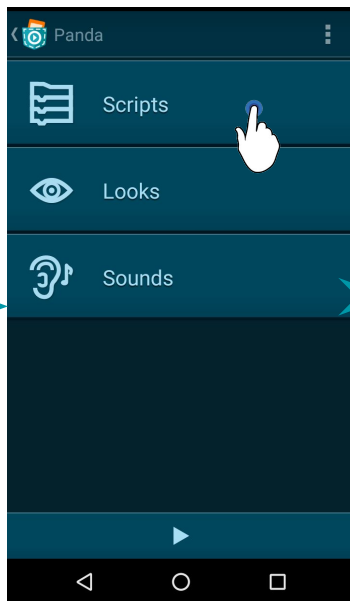
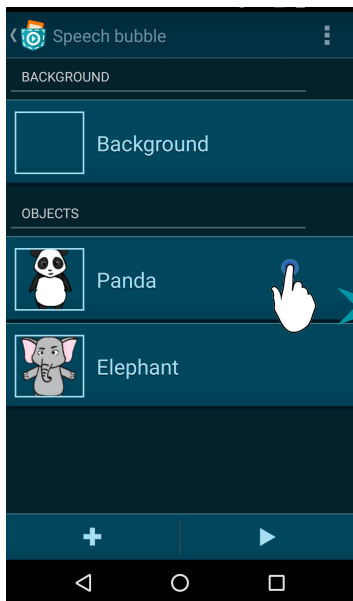
## 8) How do I add speech and think bubbles?



We'll show you how you can use speech and think bubbles in your game!

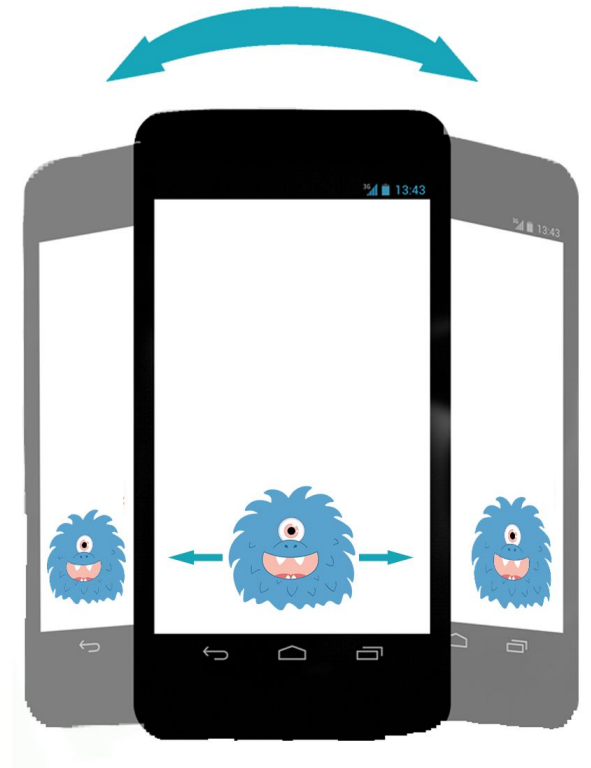
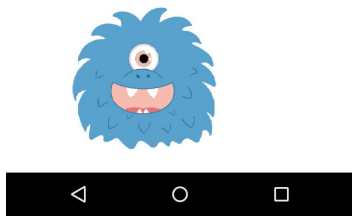
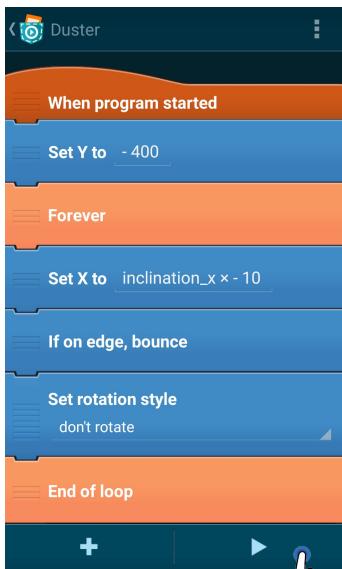
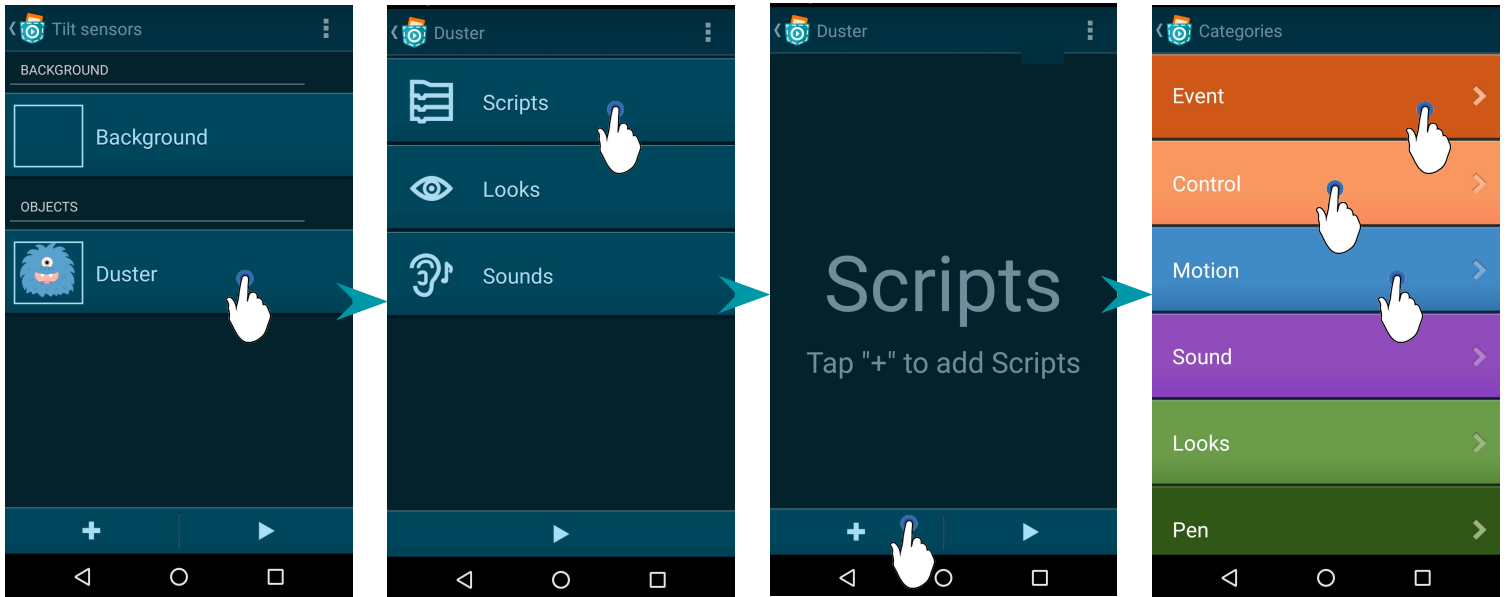
### INSTRUCTIONS:

Create a new program. In this game you will need two new objects. Add the bricks shown below and you have already created a speech bubble!



# 9) How can I use tilt sensors to control an object?

Create a new program. Add a new object. This object should move to the right and left when you tilt your smartphone.



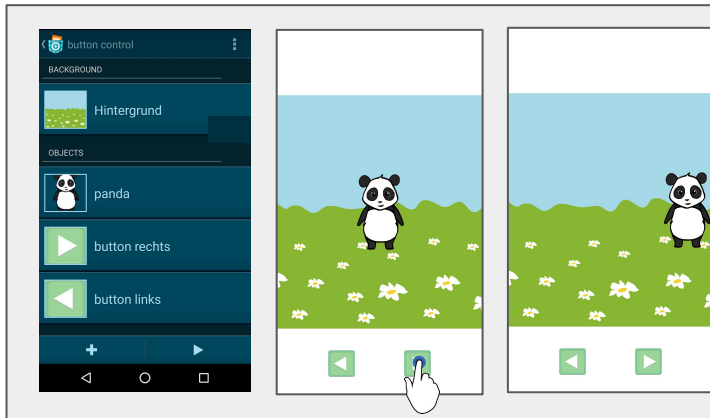
Set X to  $inclination\_x \times -10$

- Compute
- Object
- Functions
- Logic
- Device
- Data

You find the **inclination sensors** in the formula editor by tapping on *Device*.

TIP

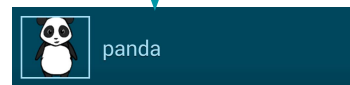
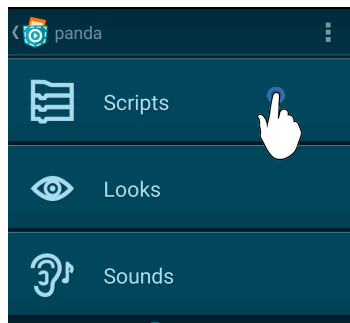
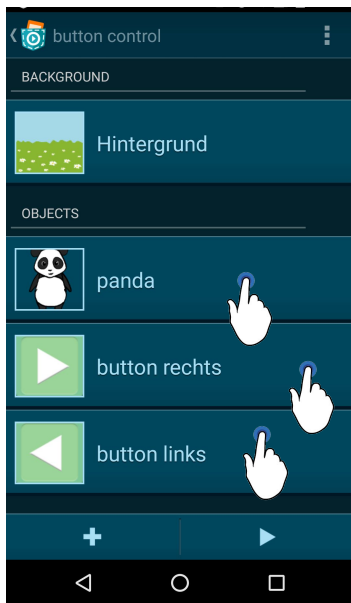
# 10) How can I use buttons to control my object?



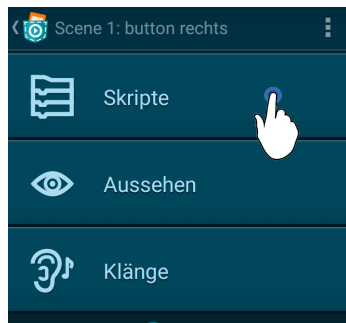
We'll show you how to use buttons to control your object.

## INSTRUCTIONS:

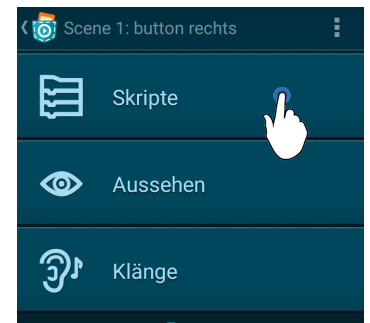
Create a new program. You need three new objects. Depending on whether you click on the left or right arrow, the panda moves accordingly.



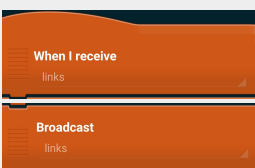
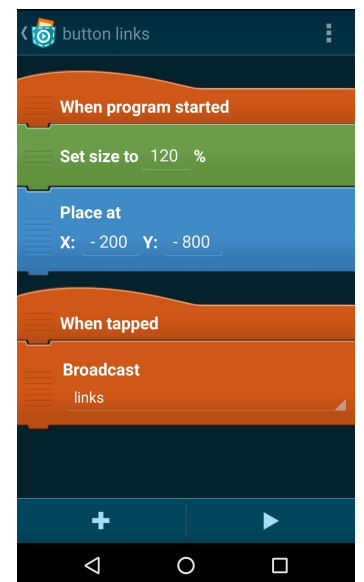
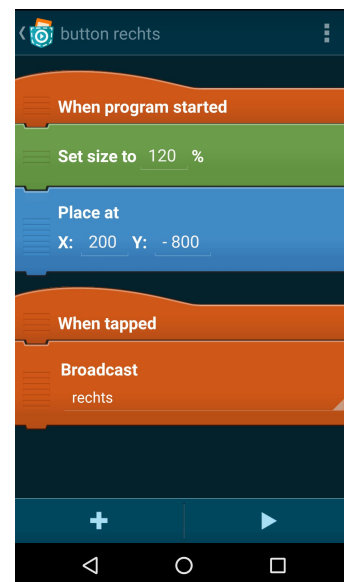
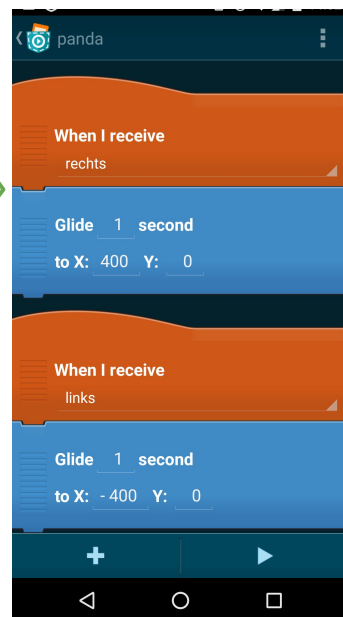
These are the bricks for our object **panda**.



These are the bricks for our object **button rechts**.



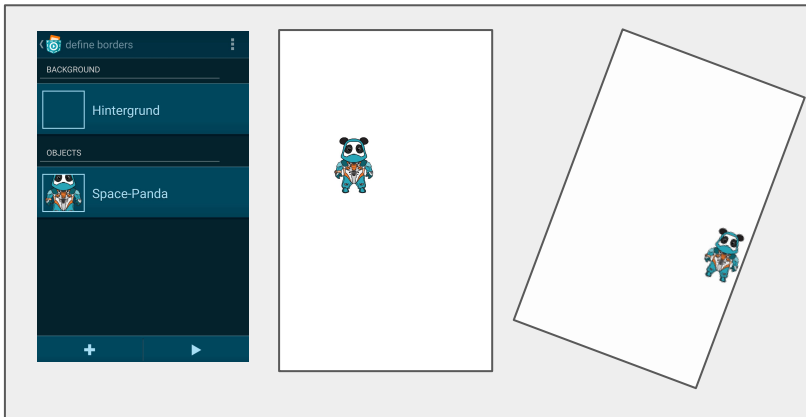
These are the bricks for our object **button links**.



Objects can communicate with each other by sending **broadcast** messages.

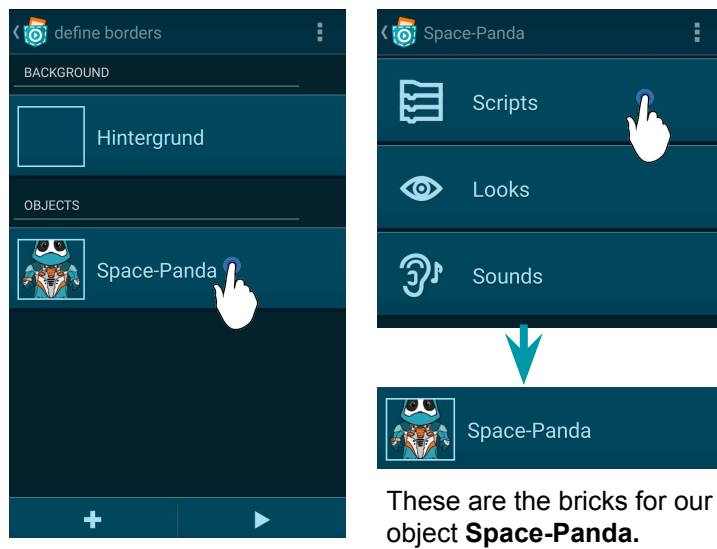
**TIP**

# 11) How can I prevent my object from leaving the screen?



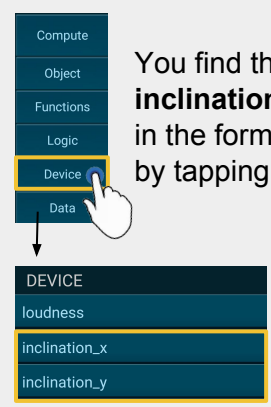
We'll show you a trick how you can easily prevent your object from leaving the screen.

**INSTRUCTIONS:**  
Create a new program. In this game you need a new object which can be controlled with the tilt sensors.



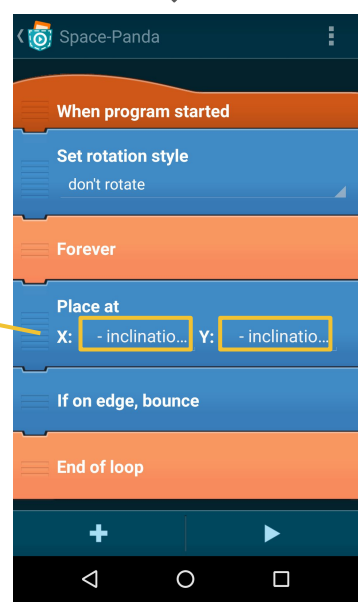
These are the bricks for our object **Space-Panda**.

You find the **inclination sensors** in the formula editor by tapping on *Device*.



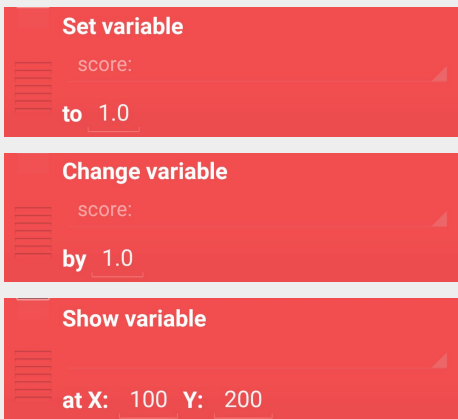
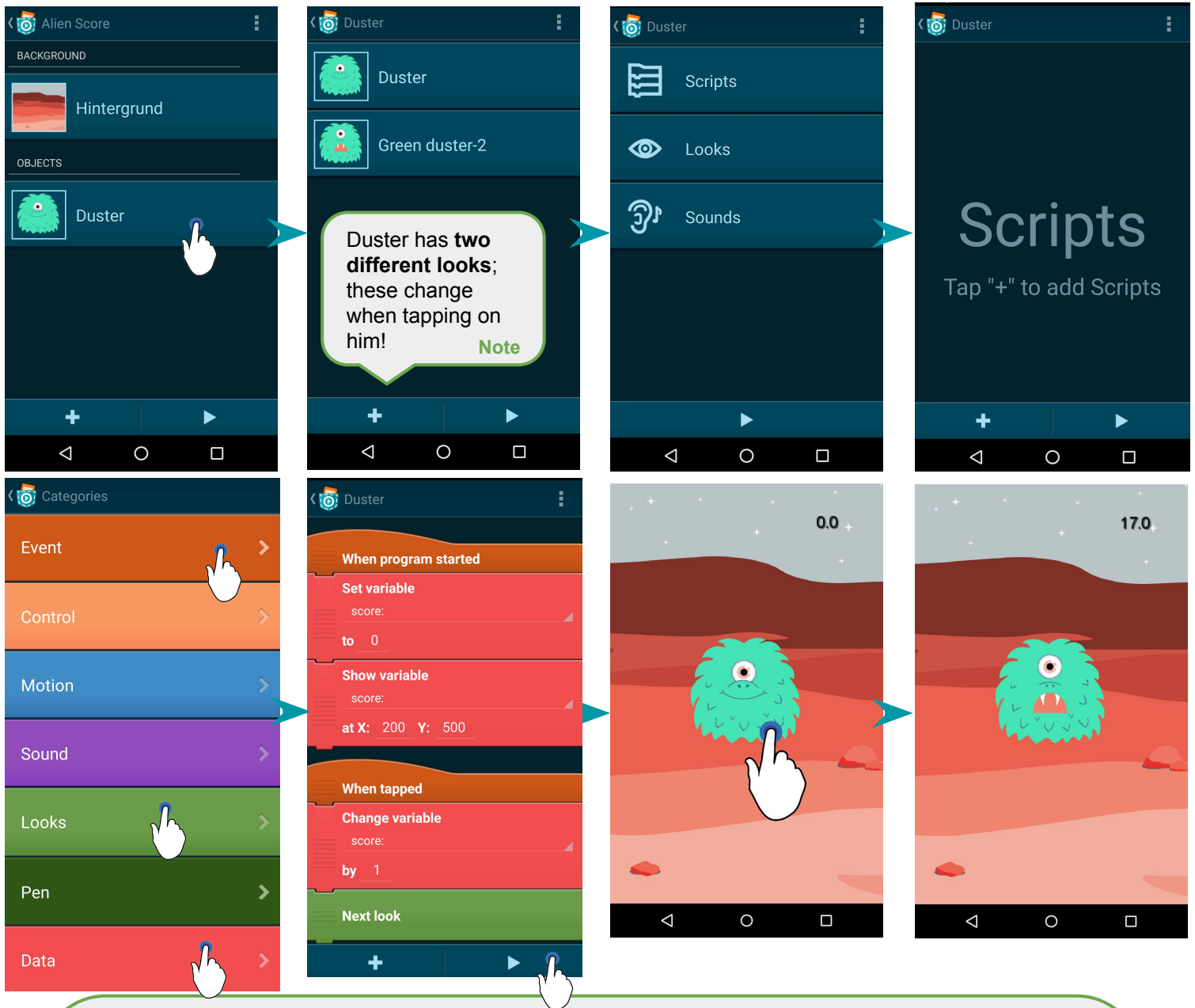
**NOTE**

For our example you need:  
X:  $- \text{inclination}_x \times 20$   
Y:  $- \text{inclination}_y \times 20$

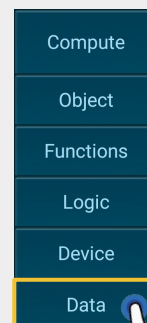


## 12) How can I get a score in my game?

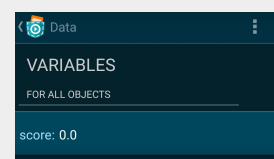
Create a new program. In this game you need a new object with two looks. Each time you tap the alien, the score increases.



You need to create a new **variable** e.g., **score**. This variable saves a certain value and shows it again on the screen. For creating, changing and showing a variable you will need the bricks on the left.

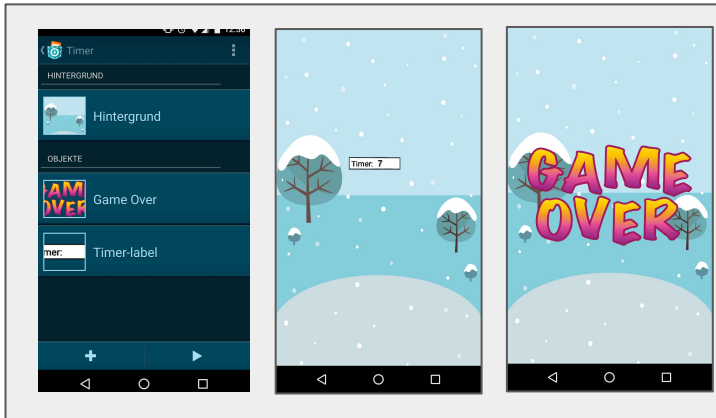


If you tap on *Data* in the formula editor you can display all your created variables.




**NOTE**

# 13) How can I add a timer to my game?



We'll show you how to add a timer to your game.

**INSTRUCTIONS:**  
Create a new program. In this game you need two new objects. The timer counts from 10 to 0, then a game over screen is displayed.



**Timer-label Properties:**

- Scripts
- Looks
- Sounds

**Game Over Properties:**

- Scripts
- Looks
- Sounds

**Timer-label Logic:**

- When program started
- Place at X: -20 Y: 182
- Set variable Timer to 10
- Show variable Timer at X: 0 Y: 200
- Repeat until "Timer" = 0 is true
  - Wait 1 second
  - Change variable Timer by -1
- End of loop
- If "Timer" = 0 is true then
  - Hide
  - Hide variable Timer
- End If

**Game Over Logic:**

- When program started
- Hide
- Wait until "Timer" = 0 is true
- Show

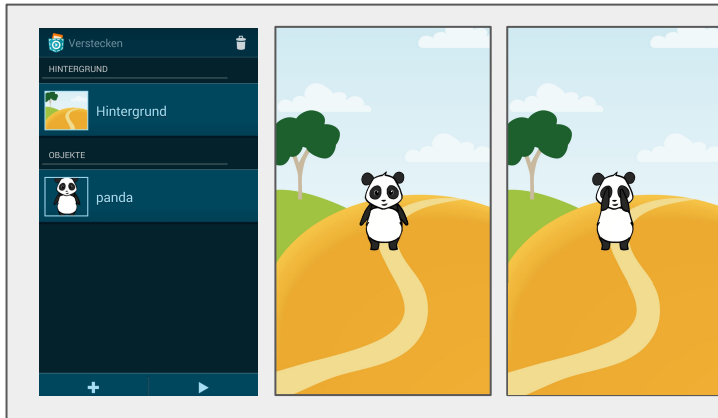
**Logic Palette:** Compute, Object, Functions, Logic, Device, **Data**

**NOTE:** You need to create a new variable e.g., **timer**. This variable saves a certain value and shows it on the screen.

That's the variable **timer** you created for the object **timer label**. Tap on **Data** to include it here.



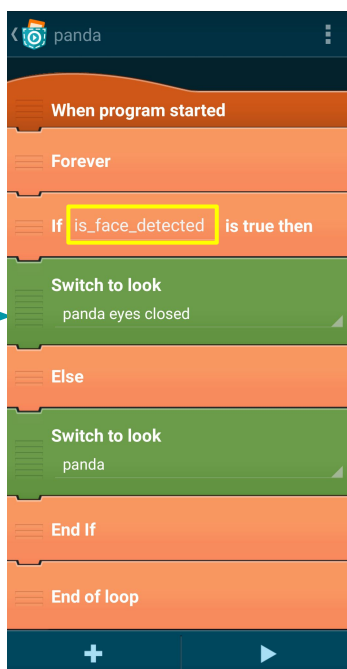
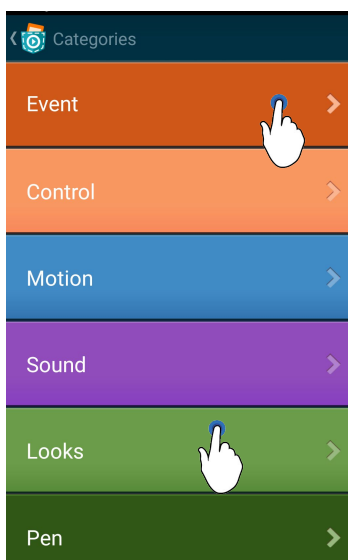
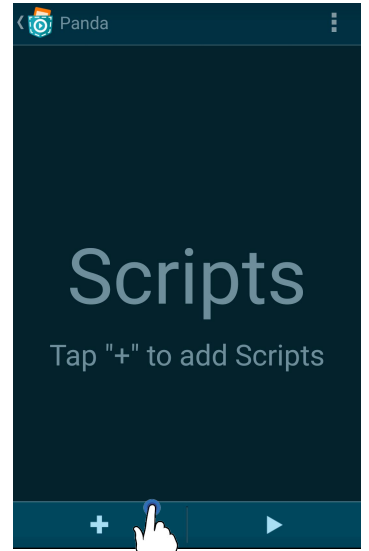
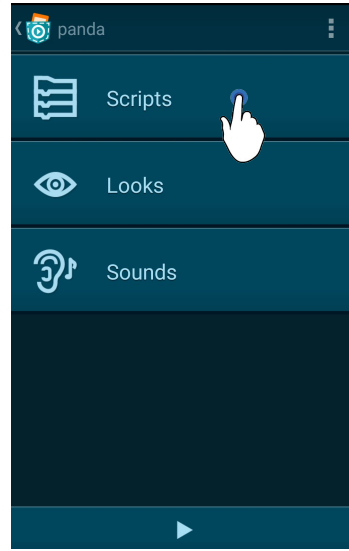
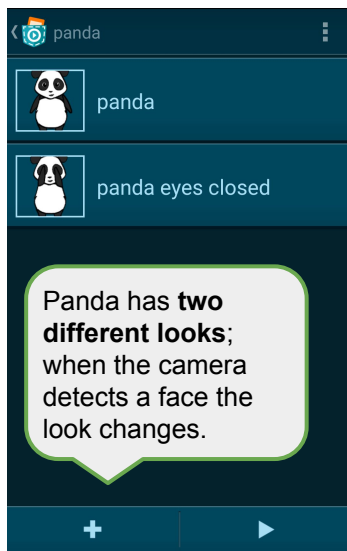
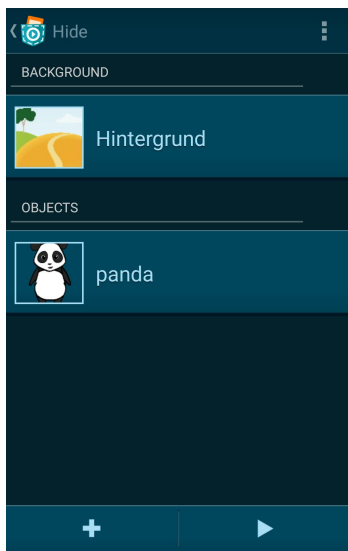
# 14) How does the face recognition work?

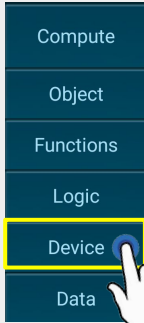


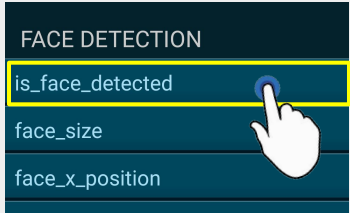
We will show you how to use face recognition in your game.

### INSTRUCTIONS:

Create a new program. In this game you need a new object with two looks. If you look at the Panda, he hides from you because your camera recognizes your face.



1.  When you tap on *Device* in the formula editor you can call the Face Detection category. Select 'is\_face\_detected'.

2. 

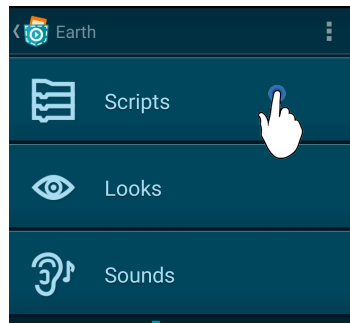
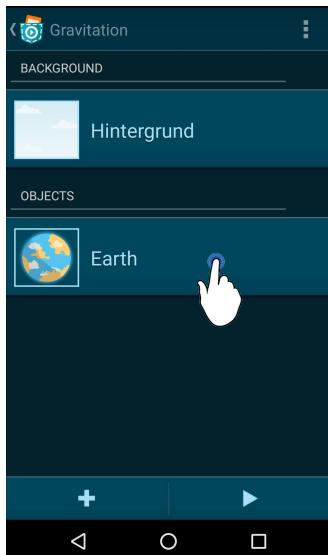
**TIP!**

# 15) How do I control an object by using gravitation

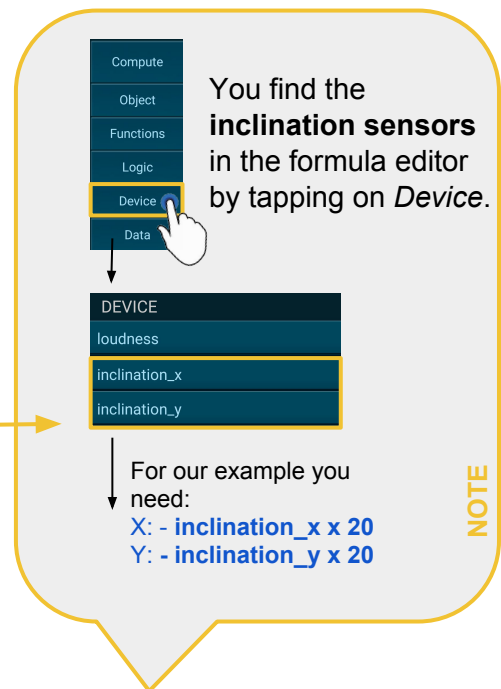


We will show you how to use gravity to control an object.

**INSTRUCTIONS:**  
Create a new program. In this game you need a new object. When you move your mobile device, your object moves accordingly.



These are the bricks for our object **Earth**.

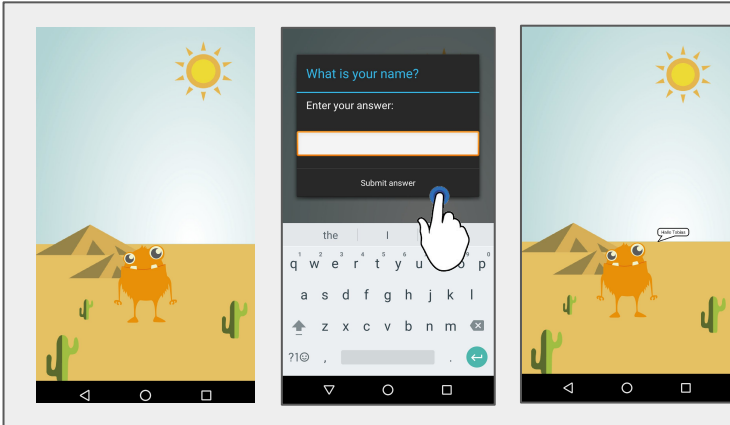


You find the **inclination sensors** in the formula editor by tapping on *Device*.

For our example you need:  
X: - **inclination\_x** x 20  
Y: - **inclination\_y** x 20

**NOTE**

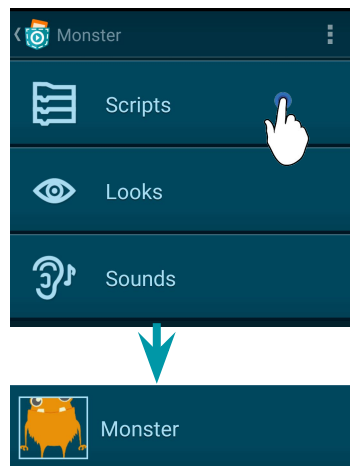
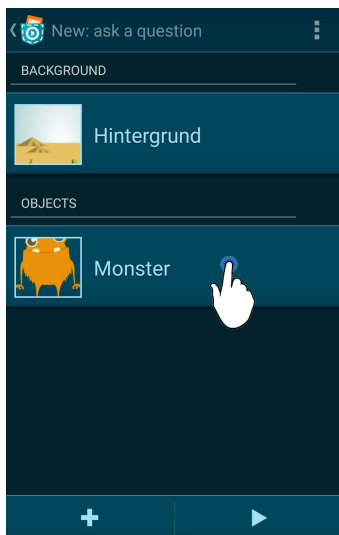
# 16) How can I ask a question?



We'll show you how to make your game even more interactive by using text input - e.g. for a quiz or a narrative.

## INSTRUCTIONS:

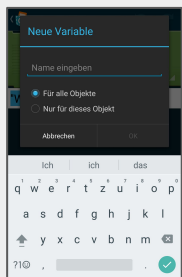
Create a new program. In this game you need one new object.



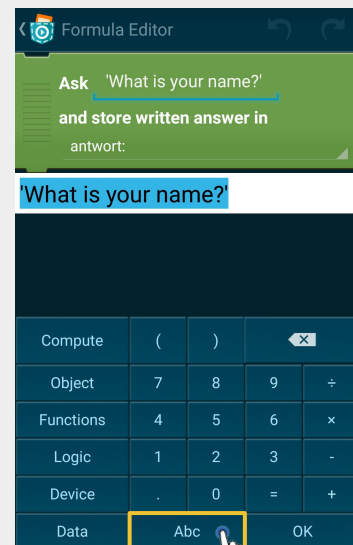
These are the bricks for our object **Monster**.



Create a new variable e.g., **antwort**.

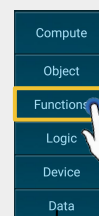


**NOTE**

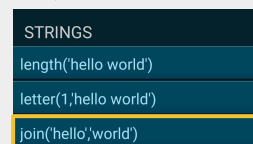


**NOTE**

Use the **keyboard (Abc)**, to write your question.

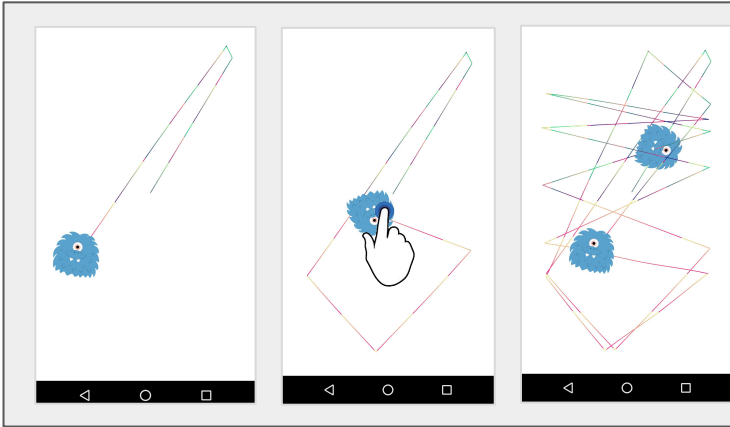


You will find the function **join** by clicking on *Functions* in the formula editor.



**NOTE**

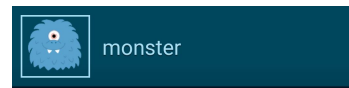
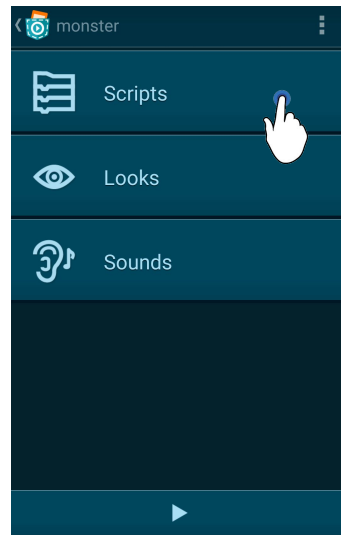
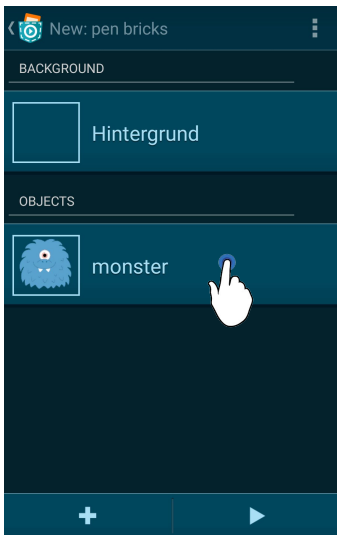
# 17) How do I draw lines and use the stamp tool?



We will show you how your object can draw lines and create clones of itself by tapping on it.

## INSTRUCTIONS:

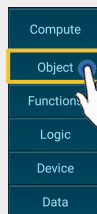
Create a new program. In this game you need one new object.



These are the bricks for our object **monster**.



If you do not want to specify a fixed color value, you can also use the respective X and/or Y position of your object. This will result in the rainbow look above.



You will find the **position\_x** and **position\_y** if you tap on *Object* in the formula editor.



NOTE



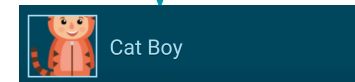
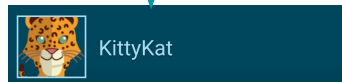
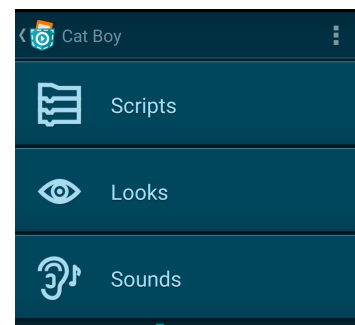
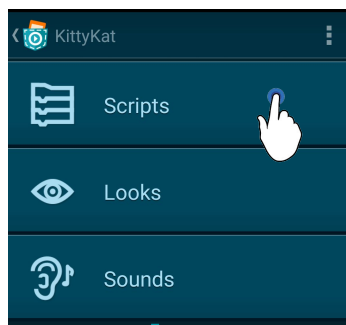
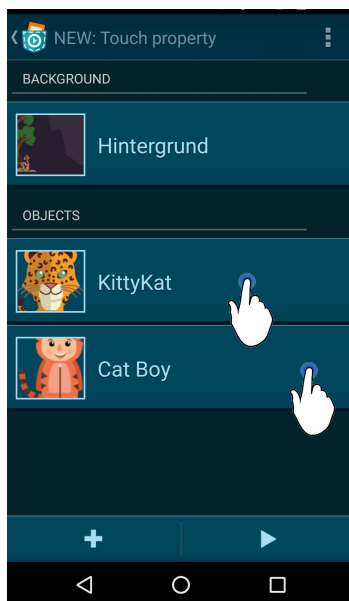
# 18) How do I program a collision between 2 objects?



We show you how to program a collision and how the object disappears as soon as the second object touches it. Catch the kitten!

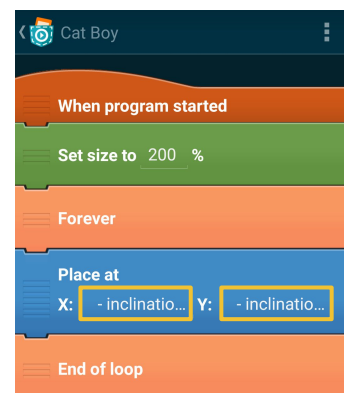
## INSTRUCTIONS:

Create a new program. In this game you need two objects. One of them can be controlled with the tilt sensors.

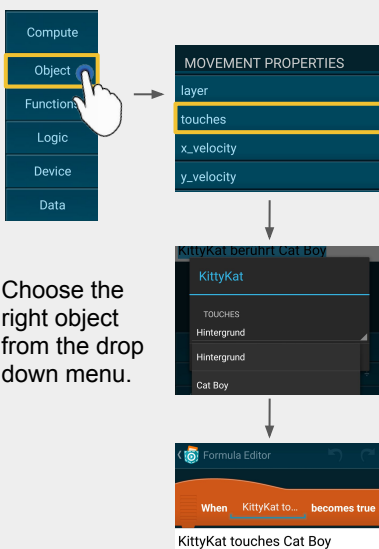


These are the bricks for our object **KittyKat**.

These are the bricks for our object **Cat Boy**.



You will find the function **touches** when you tap on *Device* in the formula editor.



Choose the right object from the drop down menu.

**NOTE**

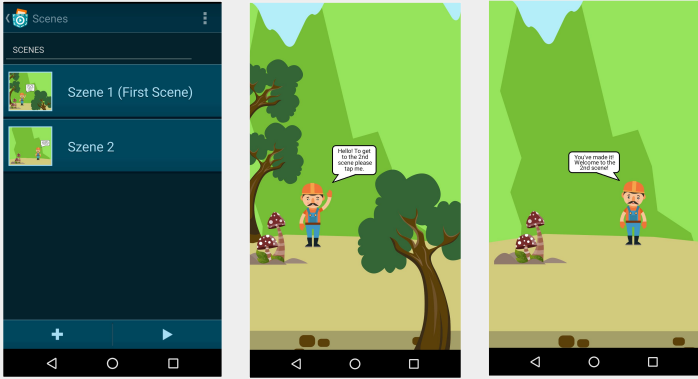


You find the **inclination sensors** in the formula editor by tapping on *Device*.

**NOTE**

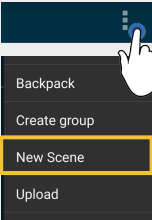
For this example use:  
 $X: - \text{inclination}_x \times 10$   
 $Y: - \text{inclination}_y \times 10$

# 19) How do I create a new scene?



You can also split your game into several scenes / levels. Each scene is a self-contained program with its own objects and variables.

**INSTRUCTIONS:**  
Create a new program. In this game you will create 2 scenes – each with its own object(s).

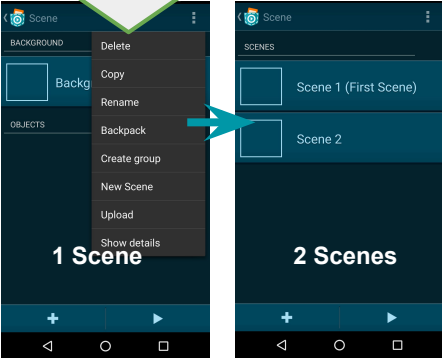


**New scene:** You can add a new scene via the overflow menu.

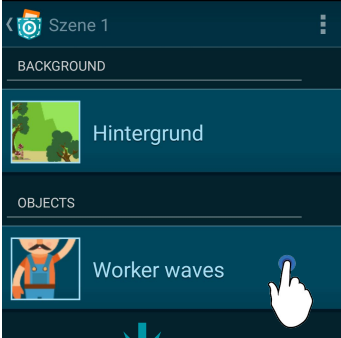
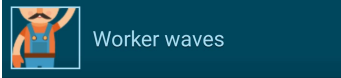
**NOTE**

## Working with scenes:

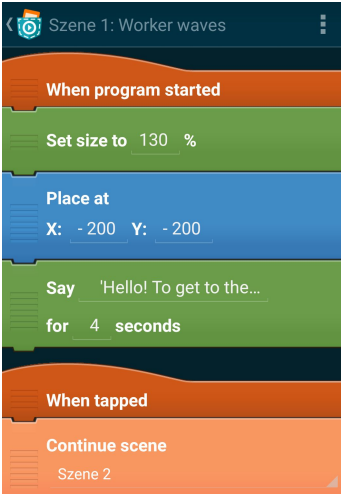
Once you've added a new scene, you can add a background and various objects to each scene, and also define when to go to the next scene. In the example, this works by tapping the object.



## SCENE 1:

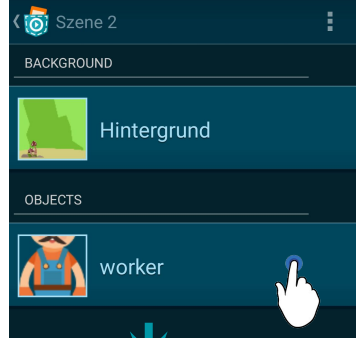
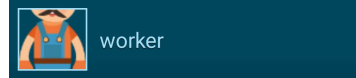



These are the bricks for our object **Worker waves**

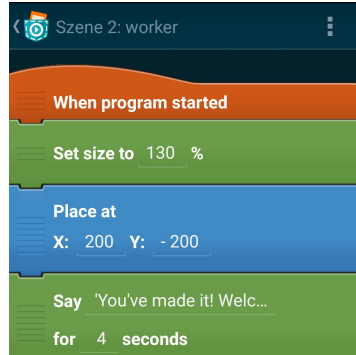


When program started  
Set size to 130 %  
Place at  
X: -200 Y: -200  
Say 'Hello! To get to the...  
for 4 seconds  
When tapped  
Continue scene  
Scene 2

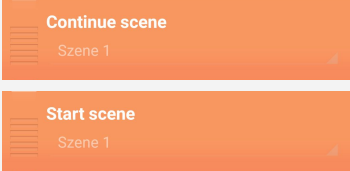
## SCENE 2:

These are the bricks for our object **worker**

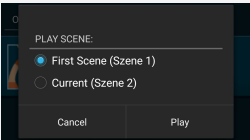


When program started  
Set size to 130 %  
Place at  
X: 200 Y: -200  
Say 'You've made it! Welc...  
for 4 seconds




**Hinweis!**

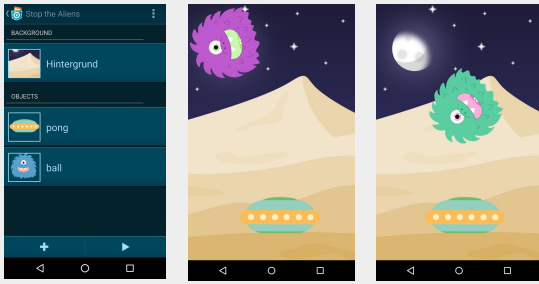
With these bricks you can control your scene transitions.



**Hinweis!**

If you tap on  you can choose with which scene you want to start.

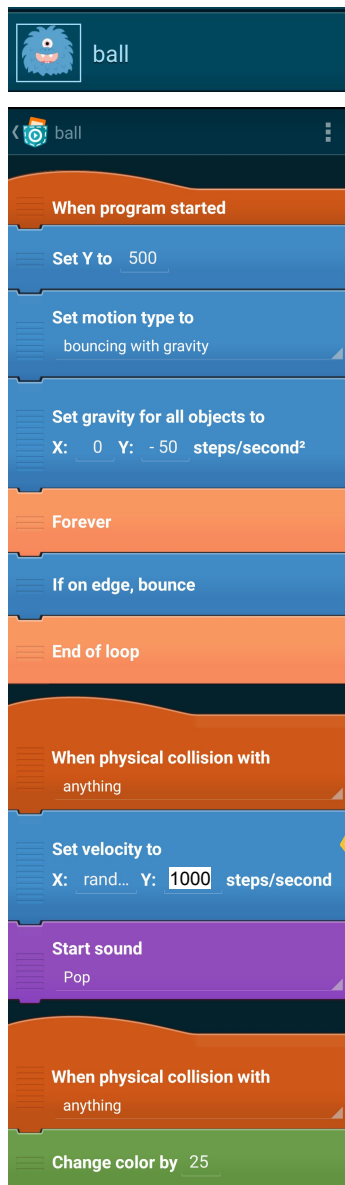
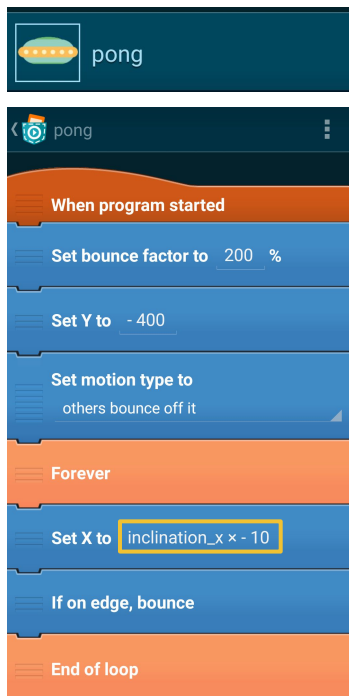
## 20) How do I let objects bounce - creating a pinball game?



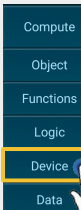
In this game the little alien bounces of the edges and the spaceship.

**INSTRUCTIONS:** Create a new program. In this game you need 2 new objects. The spaceship can be controlled via the tilt sensors.

These are the bricks for our objects **pong** and **ball**:



Set X to  $\text{inclination\_x} \times -10$

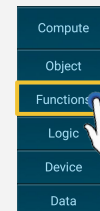


You find the **inclination sensors** in the formula editor by tapping on *Device*.

For this example use the following:  
X:  $\text{inclination\_x} \times -10$

**NOTE**

Set velocity to  
X:  $\text{rand}(\dots)$  Y: 1000 steps/second



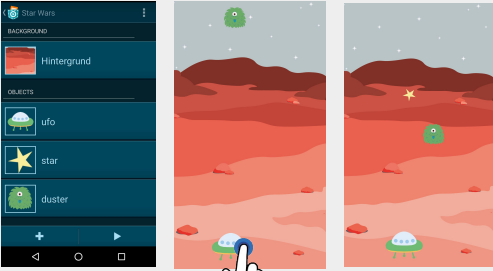
You find the **random function** in the formula editor by tapping on *Functions*.

For this example use the following:  
X:  $\text{random}(-500, 500)$   
Y: 1000

**NOTE**



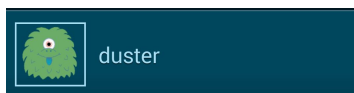
# 21) How do I create a Star Wars game?



Shoot the aliens coming from above!

**INSTRUCTIONS:**  
Create a new program. In this game you need 3 new objects. When you tap on the spaceship, stars are fired which can stop the aliens.

These are the bricks for our objects **ufo**, **duster** and **star**:



**ufo**

- When program started
- Set variable **position:** to 0
- Set size to 80 %
- Place at X: 0 Y: -800
- Forever loop:
  - Change X by  $-inclination\_x \div 2$
  - If on edge, bounce
- End of loop
- When tapped:
  - Set variable **position:** to **position\_x**
  - Broadcast **schießen**

**duster**

- When program started
- Set size to 50 %
- Set motion type to others bounce off it
- Set velocity to X: 0 Y: -900 steps/second
- Set Y to 900
- Set X to  $random(-400, 400)$
- Forever loop:
  - If **position\_y < -900** is true then
    - Set Y to 900
    - Set X to  $random(-400, 400)$
  - Else
- End If
- End of loop
- When I receive **treffer**:
  - Hide
  - Wait 0.3 seconds
  - Set Y to 900
  - Set X to  $random(-400, 400)$
  - Show

**star**

- When program started
- Hide
- When I receive **schießen**:
  - Show
  - Set motion type to bouncing with gravity
  - Place at X: **position** Y: -800
  - Set velocity to X: 0 Y: 1200 steps/second
- When physical collision with **duster**:
  - Broadcast **treffer**
  - Hide
  - Set velocity to X: 0 Y: 0 steps/second

That's the variable **position** you created for the object **ufo**. Tap on Data to include it here.

**Change X by  $-inclination\_x \div 2$**

You find the **inclination sensors** in the formula editor by tapping on **Device**.

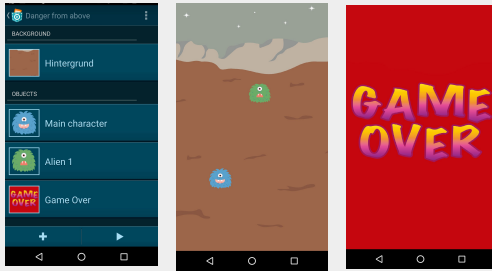
**TIP**

**Set X to  $random(-400, 400)$**

You find the **random function** in the formula editor by tapping on **Functions**.

**TIP**

## 22) How do I create a game where I have to avoid obstacles?



Try not to get hit by the aliens coming from above!

### INSTRUCTIONS:

Create a new program. In this game you need 3 new objects.

These are the bricks for our objects **Main character**, **Alien 1** and **Game Over**:

