Introduction:
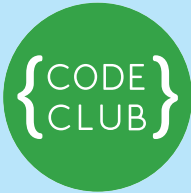
This game is a two player game where you race a parrot and a lion across the desert. Each player has to press a key as fast as they can to move their animal, the first one to reach the edge of the screen wins.

✅ **Activity Checklist** – Follow these **INSTRUCTIONS** one by one

🚩 **Test Your Project** – Click on the green flag to **TEST** your code

🔺 **Save Your Project** – Click on this to **SAVE** your work 💾

STEP 1: Create the scene and add the sprites

Keep track of your progess by ticking off the boxes below:

✅ Activity Checklist

1. Select the **Stage**, and add the **desert background**.

2. **Add a new sprite**, select the **lion sprite** that you will find in the **animals folder**.

3. Add another sprite, select the **parrot sprite** that you will find in the animals folder.

STEP 2: Make the lion and the parrot move

We want the sprite to move when you press a key.

✅ Activity Checklist

1. First **select the lion sprite** and set it to **move 4 steps** when you press the **'L'** key.

   ```
   when l ▾ key pressed
   move 4 steps
   ```

2. Next, **select the parrot sprite** and set it to **move 4 steps** when you press the **'A'** key.

   ```
   when a ▾ key pressed
   move 4 steps
   ```

🏁 Test Your Project

Click on the green flag.

Do your lion and parrot move across the screen when you press the **'A'** and **'L'** keys?

💾 **SAVE YOUR PROJECT**

STEP 3: Starting the race

We need to have a way to start the race and to know who has won. **First we create a start button.**

✔ Activity Checklist

1. Add a **new sprite from a file**. Choose the **button** sprite which is inside "things".

2. **Edit the costume of the button sprite,** add the text **'start'** to it and click **OK.** Move the sprite to the middle of the stage.

3. **Now add a script that shows the sprite when the project is run:**

   ```
   when 🚩 clicked
   show
   ```

4. Now we want the button to **count down from 3** and then say **go** and then **hide** when it is clicked. **Add another script like this one:**

   ```
   when StartRace clicked
   say 3 for 1 secs
   say 2 for 1 secs
   say 1 for 1 secs
   say GO! for 1 secs
   hide
   ```

🚩 Test Your Project

Click on the green flag.

When you press the start button does it countdown to the start of the race before disappearing?

💾 **SAVE YOUR PROJECT**

We only want the racers to move **after the race has started** and we want to know **when the race has finished** so we need **a variable** to hold that information.

5. **Add a variable** for all sprites called **racing.**
   Untick the box next to it so it does not show on the stage.

   ☐ racing

6. **Now set racing to be 0** when the project is first started.
   Change your `when flag clicked` script from before to look like **this:**

   ```
   when 🚩 clicked
   show
   set racing to 0
   ```

7. Next, `set the racing variable to be 1` when the starting countdown has finished.

8. **Now we need to stop the lion and the parrot from moving** unless the racing variable is set to be 1. Click on the parrot sprite. **Add a control block to the script** that only allows the parrot to move if **racing = 1**.

   ```
   when a key pressed
   if  racing = 1
       move 4 steps
   ```

9. Now do the same for the lion sprite.

🏁 Test Your Project

Click on the green flag.

Does the lion or the parrot move only after the countdown has finished?

SAVE YOUR PROJECT 💾

STEP 4: – Finishing the race

We want to know who wins the race and reset it when it has finished so you can race again.

✅ Activity Checklist

1. **Add a block to the parrot's script** that `sets the racing variable to be 0` when the sprite touches the edge of the screen.

2. Now we want the parrot to let us know if it wins the race. **Record a new sound** for the **Parrot sprite** that will be played when the parrot wins. Click `sounds` and then record the sound of the a parrot winning the race!

3. **Now add blocks that** `play` **the sound you recorded** and makes the parrot say it has won:

4. **Now repeat these steps for the lion.**

🏁 Test Your Project

Click on the green flag.

Can you press the start button and race by pressing the **'A'** and **'L'** keys?

Do the sprites make their winning sound and say they've won when they reach the end of the race?

🔺 **SAVE YOUR PROJECT** 💾

STEP 5: – Resetting the game

Keep track of your progess by
ticking off the boxes below:

After the race is finished we need to tell the other sprites we have won and reset the game so we can play again.

We need the winning sprite to broadcast that it has won.

✓ **Activity Checklist**

1. Click on the **Parrot sprite**. Add a block that **broadcasts** **"finished"** after the sprite says it has won.

```
when a ▼ key pressed
if      racing = 1
    move 4 steps
    if        touching edge ▼ ?
        set racing ▼ to 0
        play sound recording1 ▼
        say The Parrot Wins! for 3 secs
        broadcast finished ▼
```

2. **Now we need to add a new script** that listens for the finished broadcast and moves the parrot back to the start. **What happens if you change the value that x is set to?**

```
when I receive finished ▼
set x to -175
```

3. **Now add the same script for the lion.** Test different **x values** to make sure the lion and the parrot line up at the start.

4. We also want to put the lion and the parrot in the same position when the project is run, so **add another script to each that moves them to the start when we click the flag.**

```
when 🚩 clicked
set x to -175
```

5. **Now click on the button sprite and add a script that shows it when it receives the finished message.**

Keep track of your progess by
ticking off the boxes below:

🏳 Test Your Project

Click on the green flag.

Can you race against a friend, one of you moving the parrot by pressing **'A'** and the other moving the Lion by pressing **'L'**?

▲ **SAVE YOUR PROJECT** 💾

You have finished the basic activities, well done! Now try this challenge!

Challenge: Add a booster!

- **Try and add a booster** that you can use once each race that moves the parrot or the lion **30 steps in 1 go.**

- **Add a new costume** with fire coming out behind for each sprite and make it appear when the boost is pressed.

- **Create another sound** that the sprite will make when the boost is pressed.

```
when [ l ] key pressed
switch to costume [ lion1-a ]
if < racing = 1 >
  move (4) steps
  if < touching [ edge ] ? >
    set [ racing ] to (0)
    play sound [ recording1 ]
    say [ The Lion Wins! ] for (3) secs
    broadcast [ finished ]

when I receive [ finished ]
switch to costume [ lion1-a ]
set x to (-154)
set [ boosted ] to (0)

when 🏳 clicked
switch to costume [ lion1-a ]
set x to (-154)
set [ boosted ] to (0)

when [ p ] key pressed
if < racing = 1 and boosted = 0 >
  switch to costume [ lion1-fart ]
  set [ boosted ] to (1)
  move (24) steps
  if < touching [ edge ] ? >
    set [ racing ] to (0)
    play sound [ recording1 ]
    say [ The Lion Wins! ] for (3) secs
    broadcast [ finished ]
```