

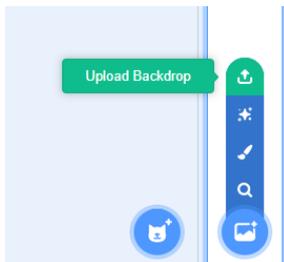
The Prince and the Castle

Go to

This guide has been design to help you create a simple game. Follow these step-by-step instructions to create an interactive game complete with scoring system. Complete the extension tasks to increase the difficulty.

1. Creating a Background

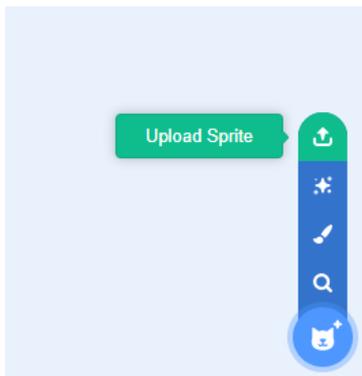
You can load the background image Joshua Tree. See images folder.



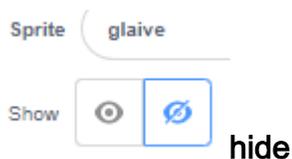
2. Click on trash symbol to get rid of the cat



3. Add the game sprites from the images folder



4. Position and hid the sprites so just the Prince and Castle are on the stage





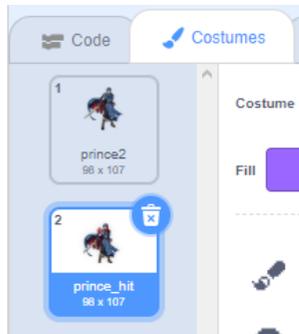
5. Each Sprite can have code attached to it. They come in different categories like motion and how the sprite looks. Remember each sprite can have more than 1 costume.

Select Prince sprite

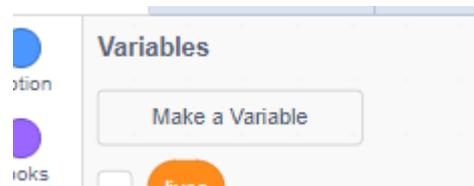
6. Now we add code to make the prince move left, right, up and down using the arrow keys. Left is minus x remember. We must have the prince sprite selected.

```
when green flag clicked
  forever loop
    if key left arrow pressed? then
      change x by -10
      point in direction 90
    if key right arrow pressed? then
      point in direction -90
      change x by 10
    if key up arrow pressed? then
      change y by 5
    if key down arrow pressed? then
      change y by -5
```

6. Still on the prince create a lives variable which is a named area of RAM. The lives score will show on the stage. Add the other costume for the Prince too.



position him at the start.



and add code to

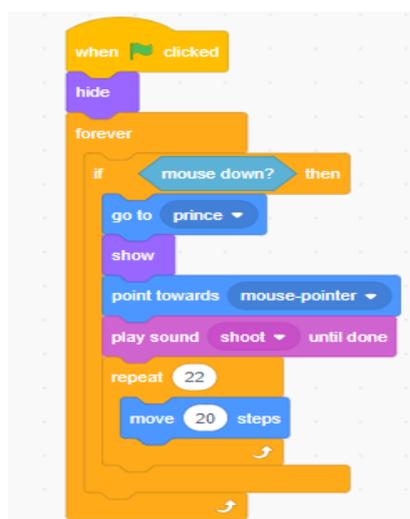


5. Now add the glaive weapon which the prince fires and the bullets which the castle fires. You can draw these yourself in Scratch if you want or use the ones provided

6. We now need to get the prince to fire at the castle by pointing at the castle with the mouse and clicking.

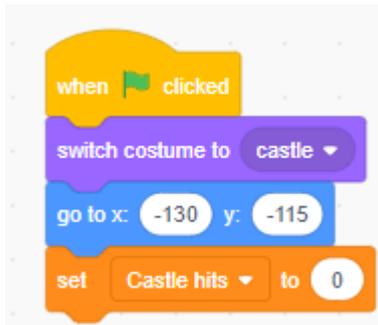
Select the glaive sprite

We don't add the glaive to the stage, instead in the glaive's code we use the mouse down and point towards castle to aim and shoot. The hide code makes the glaive invincible until we tell it to go to the prince's location .

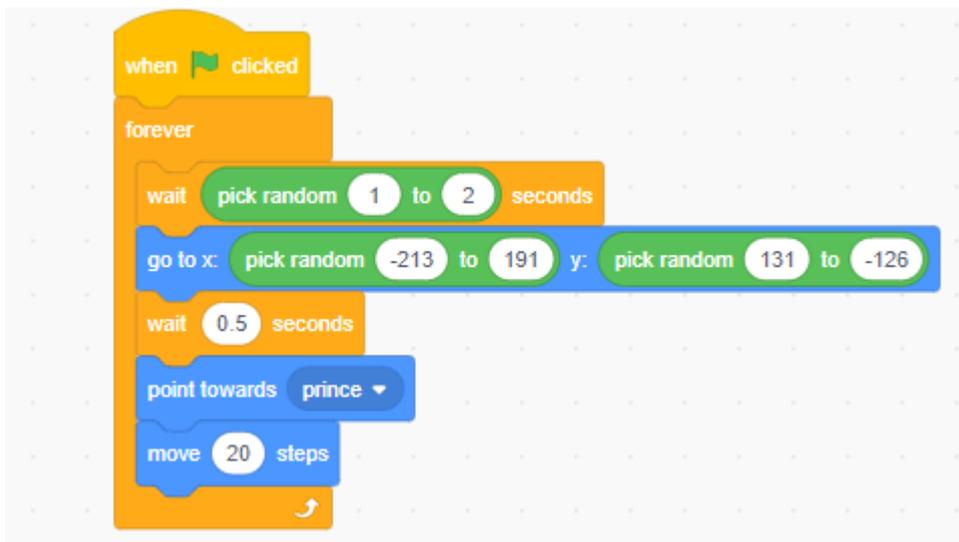


Select Castle Sprite

7. **Castle position at the start of the game** . You need to add a castle hits variable to keep track of the castle's lives.

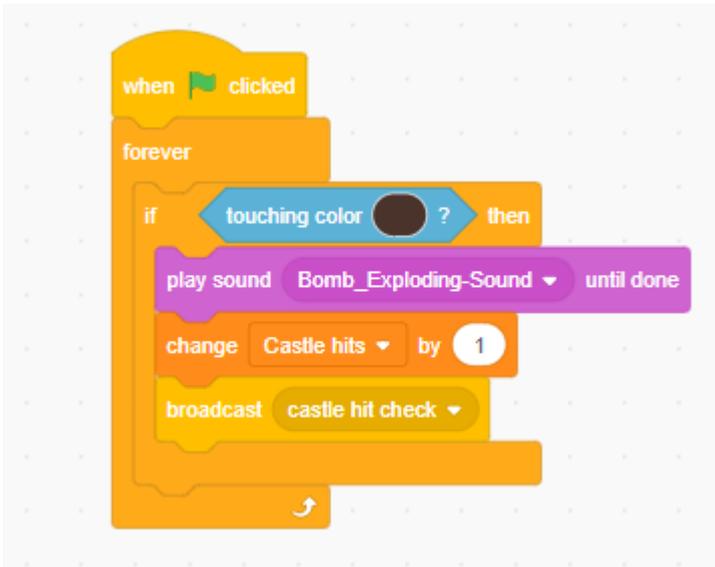


8. We want the castle to move its position at random times to a random position.



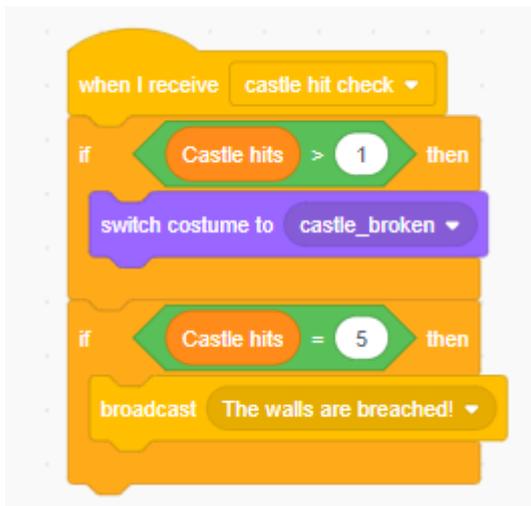
You should notice that at the end I added a little “bite”. The castle will threaten the prince by moving 20 steps towards him each time it re-appears.

9. We need to register hits on the castle by the glaive. We can set the if touching glaive or a colour on the glaive. Try both



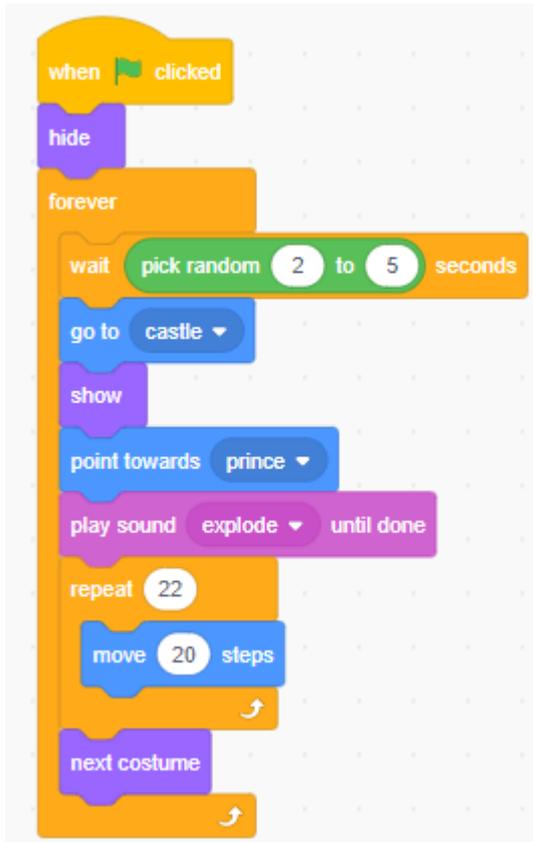
Note broadcast is really useful as other sprites can “hear” this and they can do new things as a result. It is a way off adding functions to Scratch blocks. The castle has 5 lives in the code below.

Add the castle's other costume with some of the walls down as it has been hit.



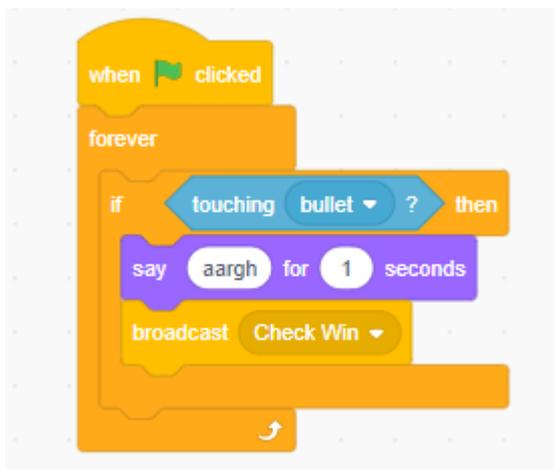
Select the bullet sprite

11. Add the exploded bullet as another costume. We now need the castle to fire bullets at the prince. I want these to only have a limited range before it explodes.



Select the Prince Sprite

12. If the prince has been hit I want his costume to change to show the one with blood. We will use the life variable to make sure he has 2 lives, and then the game ends.



Here is the broadcast check win code



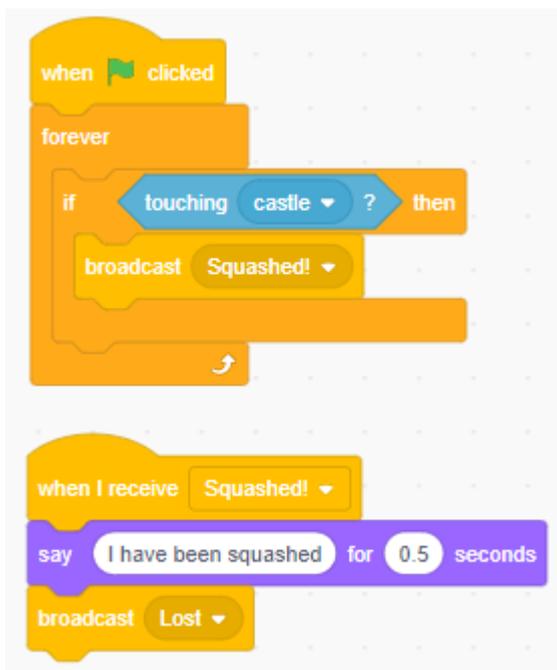
```
when I receive Check Win
change lives by -1
if lives < 1 then
broadcast Lost
```

When the Princes lives get to 0 the game is lost so a lost message is broadcast.



```
when I receive Lost
say aargh! for 1 seconds
hide
stop all
```

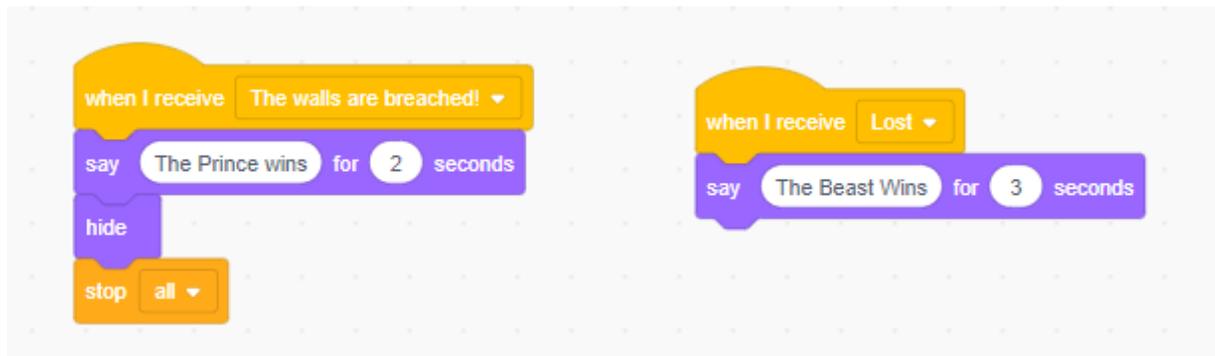
13. The other way our beloved prince can die is by being squashed by the castle



```
when green flag clicked
forever
if touching castle ? then
broadcast Squashed!

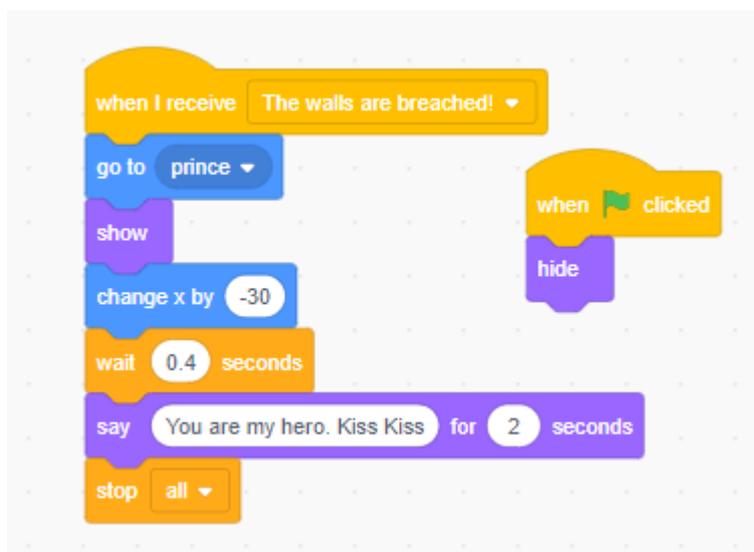
when I receive Squashed!
say I have been squashed for 0.5 seconds
broadcast Lost
```

Select the castle sprite

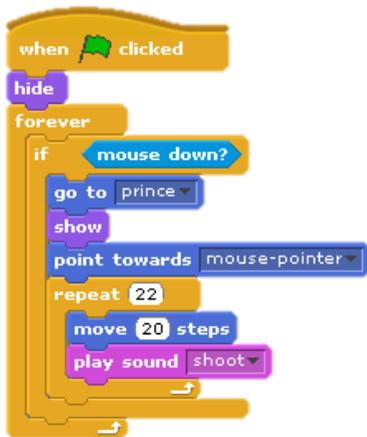


14. Give a message who wins

15. What about the princess? When the castle is destroyed, she will appear by the side of the prince and express her love and gratitude. At start she is hidden away.



16 Each sprite can have sounds E.g. the arrow and the bomb. Import them and you can add them to where shots are fired



Extensions: How would you add “friends” to appear as in the original story line. See if you can add a new level with less lives for example. There are instructions available to add levels and a health meter to your game.