

Pygame Collisions!



Pygame Collisions

Our game is looking great so far! But it would be even better if the things in our game could react when something collides with them!

Pygame already knows how to work this out, let's learn how to do it!

Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



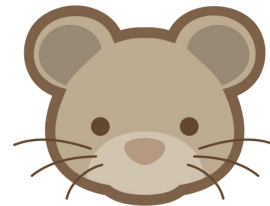
Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



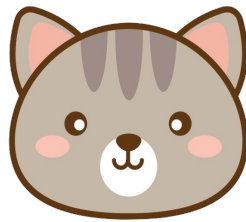
Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



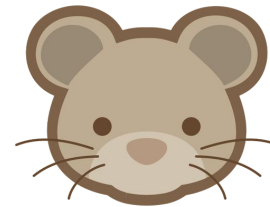
Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



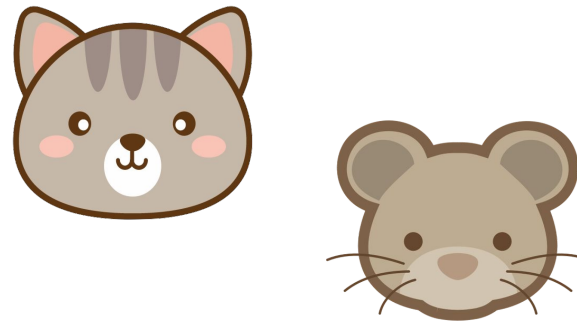
Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



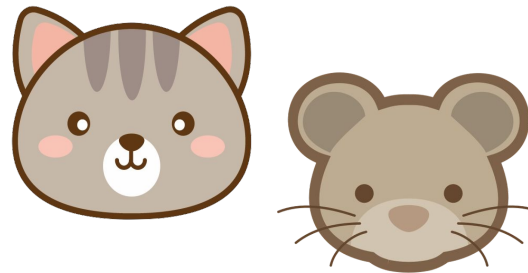
Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!



Cat & Mouse

Let's have a look at this example where we have a game where the cat has to catch the mouse!

I win!



Cat & Mouse



Let's have a look at a little bit of the code from this game. We've left out some of it to keep it short

```
while True:  
    cat = screen.blit(cat_image, (cat_x, cat_y))  
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))  
    display.update()
```


Cat & Mouse



Let's have a look at a little bit of the code from this game. We've left out some of it to keep it short

```
while True:  
    cat = screen.blit(cat_image, (cat_x, cat_y))  
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))  
    display.update()
```

What does this code do?

Cat & Mouse



Let's have a look at a little bit of the code from this game. We've left out some of it to keep it short

```
while True:  
    cat = screen.blit(cat_image, (cat_x, cat_y))  
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))  
    display.update()
```

What does this code do?

It blits the cat image and the mouse image to the screen and then updates the display!

Collidect

We need to be able to tell when our cat collides with our mouse! Let's have a look at the code to do that

```
while True:
    cat = screen.blit(cat_image, (cat_x, cat_y))
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))
    display.update()

    if cat.collidect(mouse):
        print("I win!")
```

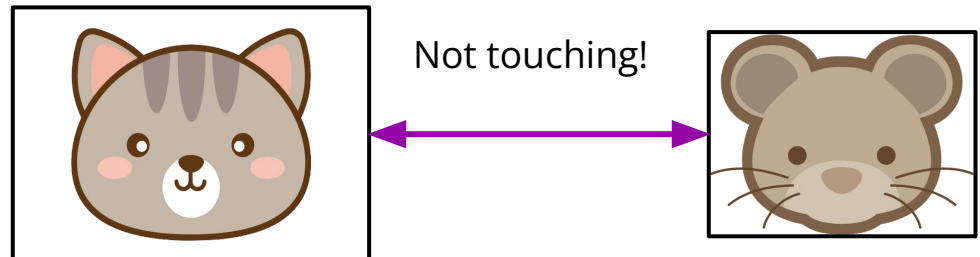
Colliderect

Let's take a closer look!

```
while True:
    cat = screen.blit(cat_image, (cat_x, cat_y))
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))
    display.update()

    if cat.colliderect(mouse):
        print("I win!")
```

This if statement checks if the cat's rectangle collides (touches) the mouse's rectangle



Collidect

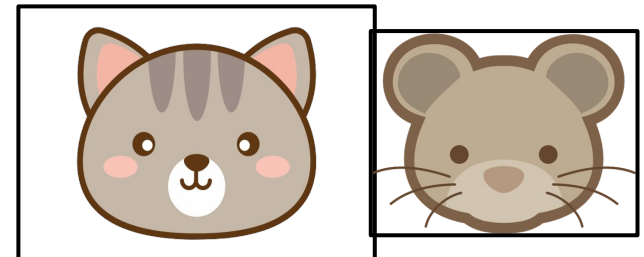
Let's take a closer look!

```
while True:
    cat = screen.blit(cat_image, (cat_x, cat_y))
    mouse = screen.blit(mouse_image, (mouse_x, mouse_y))
    display.update()

    if cat.collidect(mouse):
        print("I win!")
```

This if statement checks if the cat's rectangle collides (touches) the mouse's rectangle

Touching!



Project time!

Now we can **collide** our knowledge with the workbook and do the next part!

Try to do the next Part

The tutors will be around to help!