Lesson 5 – Animation Projects

Project No 1 – Simple Animation

The story line for this project is:

- **There is an agile cat. She goes to a jungle near by.**

- **She is running around and enjoying herself.**

- **A photographer is impressed by her jumps and**
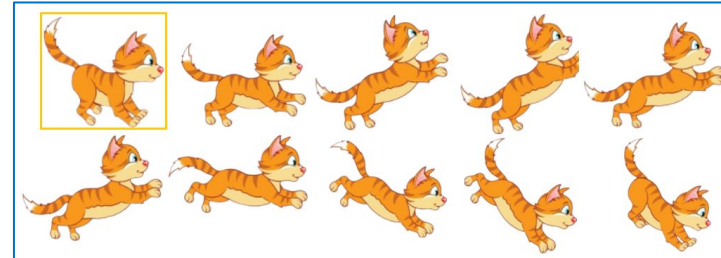- **He clicks a fast motion photo as a clip of her jumps.**

Can you make this photo clip of her jumps through coding?

Animation Procedure – Step 1

Select the sprite & backdrop.

Draw or download the animation frames of the selected sprite.
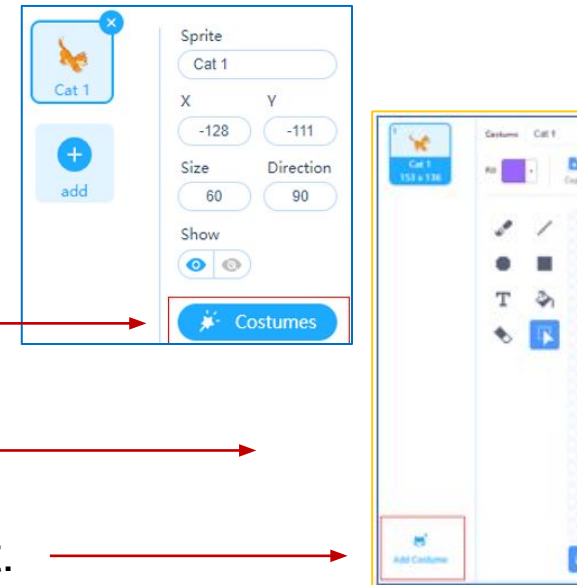
Add the animation frames in my library as cat 1 to cat 10.

Animation Procedure – Step 2

In SIA select cat 1 as your main sprite.

Click on costumes.

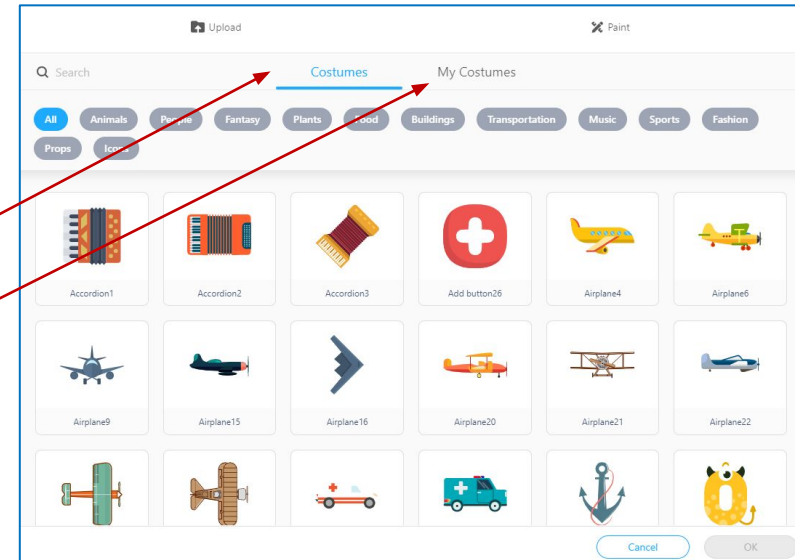**Add a costume** window appears.

Select Add a Costume icon at bottom left.

Animation Procedure – Step 3

**On Clicking the add costume icon
this window appears.
This is the Costume window.**

**It's options are Costumes
            & My Costumes.**

It also has the upload and paint option.
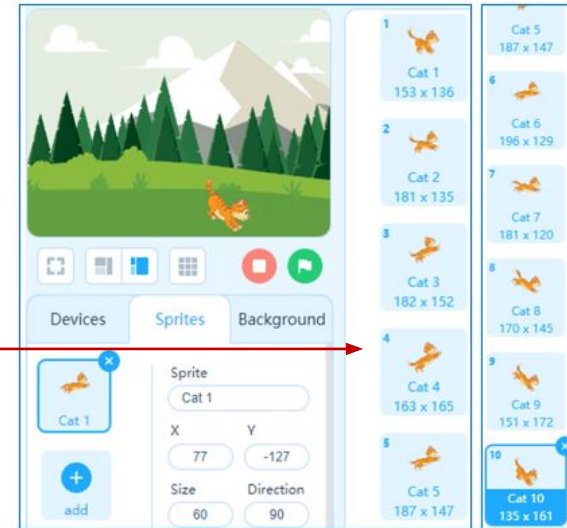
You have two options for upload.
    1. Add them one by one.
    2. Select Cat 2 to 10 together.

On upload, they appear in My Costume.

They appear next to stage area.

The final look of the screen is as shown.

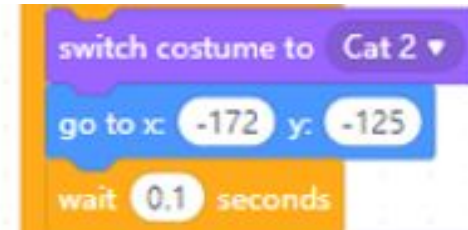**Animation Procedure – Step 4**

Coding Cat 1

Now write a code for cat in a manner to create an animation effect.

The suggested code is.

Coding Cat 2 & the Rest

**In a similar manner code cat 2
as a costume of cat 1.**

**To code remaining sprites
follow same procedure as for cat 2. These will
all be costumes of sprite 1.**

Animation Procedure – Step 5

Compiling individual codes - They are simply placed one below the other in the right sequence.
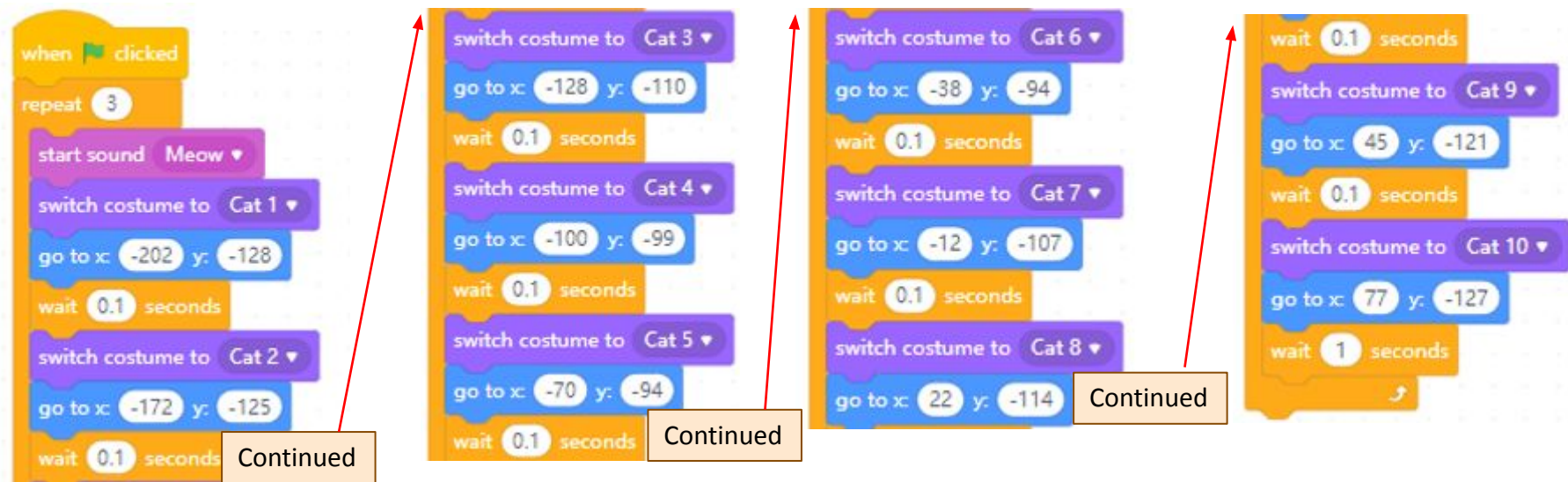
Simple Animation - Project 2

The story line for this project is:

- **There are two ninja fighters.**

- **One is tall and the other is small.**

- **They fight but the small one looses.**

Code of bigger sprite Attacker

```
when [flag] clicked
set size to 150 %
switch costume to Attack_2-removebg-preview
go to x: -75 y: -85
wait 0.8 seconds
switch costume to Attack_1-removebg-preview
go to x: -71 y: -84
wait 0.8 seconds
switch costume to Attack_3-removebg-preview
go to x: -71 y: -84
wait 0.2 seconds
switch costume to Attack_4-removebg-preview
go to x: -68 y: -83
wait 0.2 seconds
broadcast message1
```

Code of smaller sprite defender

```
when [flag] clicked
set size to 50 %
switch costume to Fight_1-removebg-preview
go to x: 79 y: -84
wait 0.3 seconds
go to x: 60 y: -82
wait 0.3 seconds
set size to 120 %
switch costume to Fight_2-removebg-preview
go to x: 44 y: -81
wait 0.3 seconds
set size to 110 %
switch costume to Fight_3-removebg-preview
go to x: 23 y: -81
wait 0.3 seconds
set size to 50 %
switch costume to Fight_1-removebg-preview
go to x: 8 y: -80
wait 0.3 seconds
```

```
when I receive message1
set size to 120 %
switch costume to Fight_4-removebg-preview
wait 0.2 seconds
go to x: 28 y: -87
wait 0.2 seconds
go to x: 38 y: -98
wait 0.2 seconds
go to x: 62 y: -122
wait 0.2 seconds
switch costume to Fight_5-removebg-preview
go to x: 73 y: -133
```
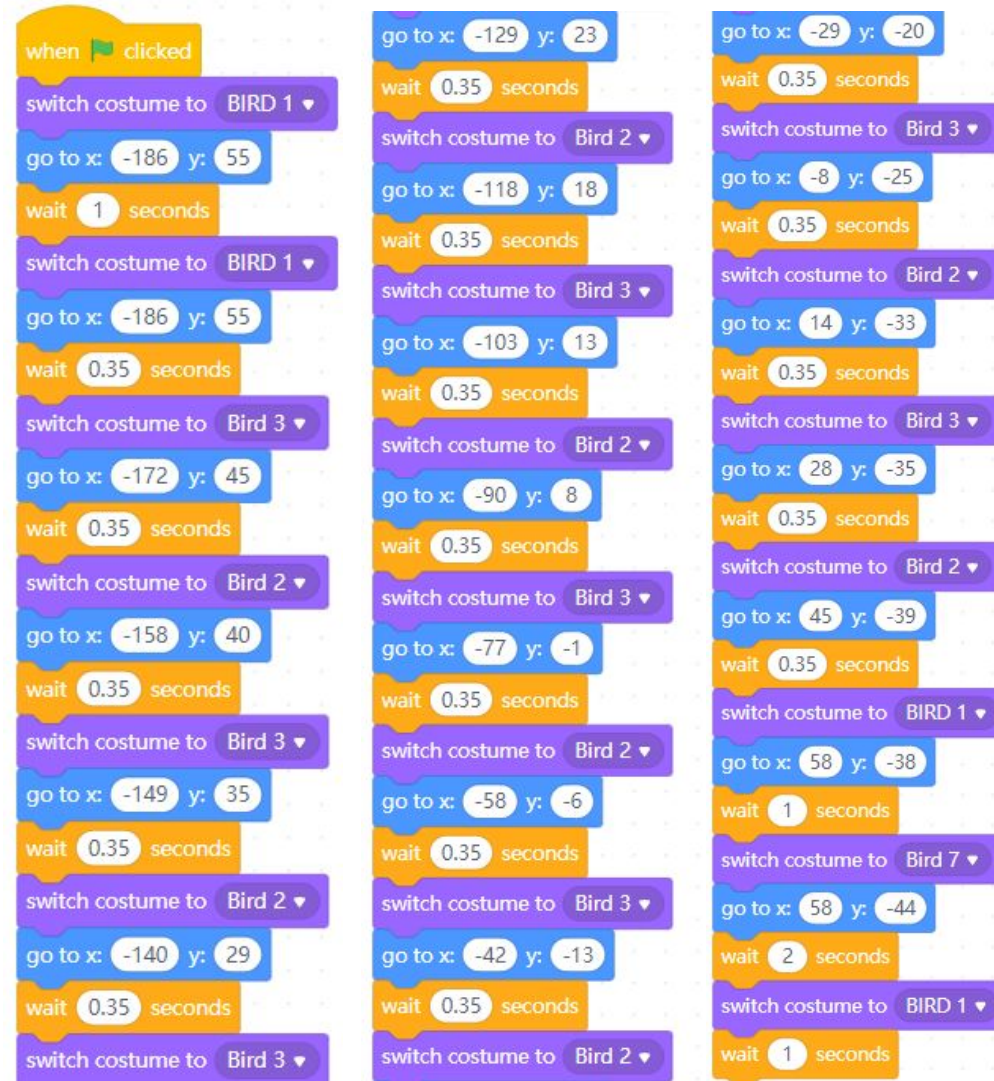
Simple Animation - Project 3

The story line for this project is:
- There is a thirsty bird.

- She is sitting on a tree.

- She spots a pot full of water

- She flies to the pot and has a few sips.

Final Project Code

Note:
Each flutter of the bird
Is coded as a
Separate costume
With
Separate position

Advance Animation - Project 4

The story line for this project is:

- **A boy is in his castle. He calls his cat but she does not come.**

- **He calls again and she does not come.**

- **He calls the third time and she comes in jumping towards him.**

**First try yourself using sprites, backdrops and music from your library.
If in doubt, see the project code.**

Step 1.

Open mBlock 5 software.

**Download and add a suitable background
to My Background library.**

Add this as the background of the code.

Step 2

Create your own sprite 'Boy'
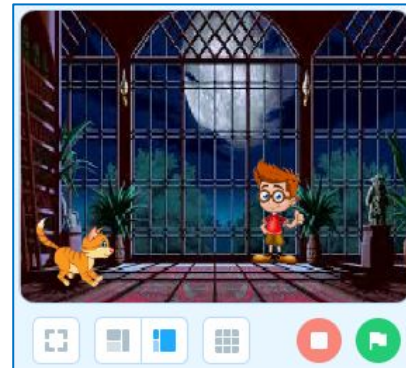
Add to your sprite library.

Import it to the stage.

Step 3

Create a Sprite Cat.

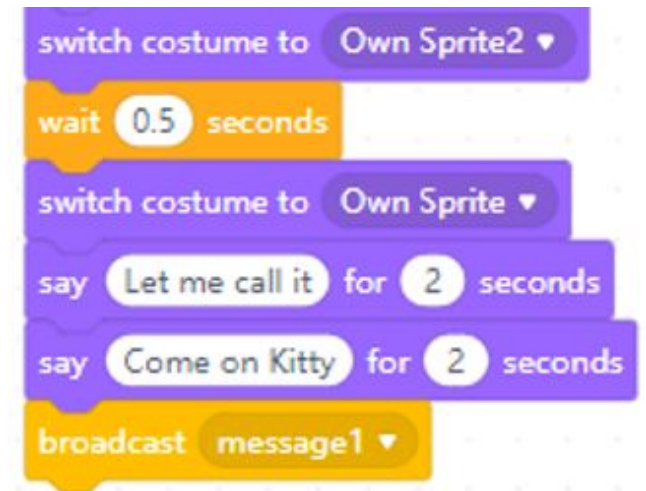**Create its costumes.**

Add them to your sprite library.

Use during coding

Step 4

Let us write code for Boy.

Step 5

Let us write code for Cat.

Own Music added


```
when I receive message1 ▼
show
start sound Meow cat-sound-effect ▼
switch costume to Cat 1 ▼
go to x: -202 y: -128
wait 0.1 seconds
switch costume to Cat 2 ▼
go to x: -172 y: -125
wait 0.1 seconds
```

```
switch costume to Cat 3 ▼
go to x: -128 y: -110
wait 0.1 seconds
switch costume to Cat 4 ▼
go to x: -100 y: -99
wait 0.1 seconds
switch costume to Cat 5 ▼
go to x: -70 y: -94
wait 0.1 seconds
```

```
switch costume to Cat 6 ▼
go to x: -38 y: -94
wait 0.1 seconds
switch costume to Cat 7 ▼
go to x: -12 y: -107
wait 0.1 seconds
switch costume to Cat 8 ▼
go to x: 22 y: -114
```

```
wait 0.1 seconds
switch costume to Cat 9 ▼
go to x: 45 y: -121
wait 0.1 seconds
switch costume to Cat 10 ▼
go to x: 77 y: -127
wait 1 seconds
```

```
when 🚩 clicked
hide
```

Final Project view

Click Green Flag
See the clip play.

Final Project view

Click Green Flag
See the clip play.

To Consolidate

Kindly go through this & previous chapter couple of times.

Repeat the same projects a couple of times.

Make three short and imaginative story lines.

Code as per those story lines.

Create your libraries as per the story line.

Use different sprites, background and music.

Share with teachers, family and friends.

Code Karega India Badhega