

# Perception and Multimedia Computing

## Key Frame Animation

Friday 17th Nov 2017

This lab sheet explores flip book animation and key frame animation.

### 1. The sketch developed in this part simulates a flip-book animation.

- a. Visit the website at <http://www.zuzu.org/printout.html> and download the images on that page.
- b. Declare a variable "frames[ ]". Write a p5.js function loadFrames whose argument is an integer n (in this case set n = 26). LoadFrames should load images to frames[]. For instance:
  - frames[0] should be set to the image "title.gif";
  - frames[1] should be set to the image "title2.gif";
  - Otherwise, frame[i] should be set to the image whose name is the string formed by concatenating "K", i -1 and ".gif" together.
- c. Declare a variable in your sketch to store the current frame number. In your draw routine, display the image corresponding to that frame number, and increment the frame number variable (returning to 0 if necessary).
- d. Can you think of ways to improve this?

### 2. Key frame animation and linear interpolation

- a. In your setup function, draw three circle like the figure below. Use these three circles as keyframes (in order to do this, you will need to define their position and frame number).



- b. Write a function (inBetweenFrames) which takes two keyframes and return all frames in between - the easiest way to do this is to use linear interpolation ( p5.Vector.lerp() ). Call your inBetweenFrames function in your setup function to generate all the frames.
- c. In your draw function, draw an object which follows the in-between frames. Does the object move from one circle to another? Try a set of different keyframes and see how the animation changes.
- d. Is the movement smooth and could you think of ways to improve this?