

# Animation in Tkinter

# What's Canvas ?

- It's a widget that supplies graphics facilities for **tkinter**. Among these graphical objects are lines, circles, images, and even other widgets. With this widget it's possible to draw graphs and plots, create graphics editors, and implement various kinds of custom widgets.

# Canvas Syntax

- `Canvas(master, width=width, height=height)`

# How to create shapes using canvas

- `Canvas.create_oval(x0, y0, x1, y1, fill="someColor")`
- `Canvas.create_rectangle(x0, y0, x1, y1, fill="someColor")`
- `Canvas.create_arc(x0, y0, x1, y1, fill="someColor")`
- `Canvas.create_line(x0, y0, x1, y1, fill="someColor")`

# How to move a shape ?

- `Canvas.move(shape, xspeed, yspeed)`

# How to get the current coordinates

- `Canvas.coords(shape)` # it will return the positions in the following format:
  - 1) `pos[0]` = left
  - 2) `pos[1]` = top
  - 3) `pos[2]` = right
  - 4) `pos[3]` = bottom

# Tasks

- Animate a shape to move horizontally and vertically and diagonally.
- Convert your code to a class and try to reuse it 2 times(The animation for 2 shapes).
- Create 100 objects of the shape class and animate it.