

UI - Scribble : Firework

<input>
type = "hidden"
id = "check"

<input>
type = "text"
id = "name"
required

<select>
name = "color"
id = "color"

<input>
type = "radio"
name = "pattern"
id = "circle"/"star"/"cross"

<input>
type = "range"
id = "size"

<input>
type = "range"
id = "lifespan"

<button>
type = "button"
id = "createButton"
>click

<button>
type = "button"
id = "saveButton"
>click

Create your Firework

Name

Color

Pattern

Size

Lifespan

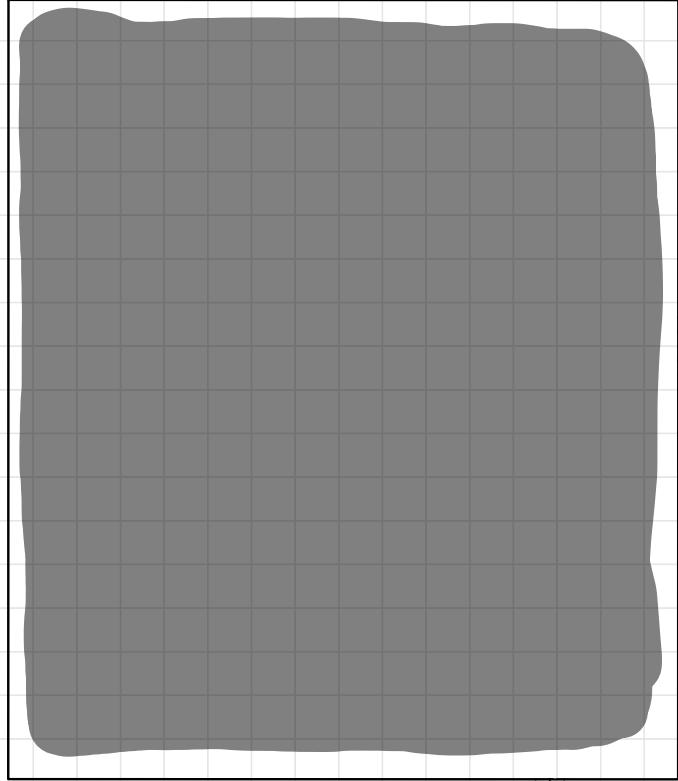
Create

Save current Firework

<div>
id = "create"
>change

with id

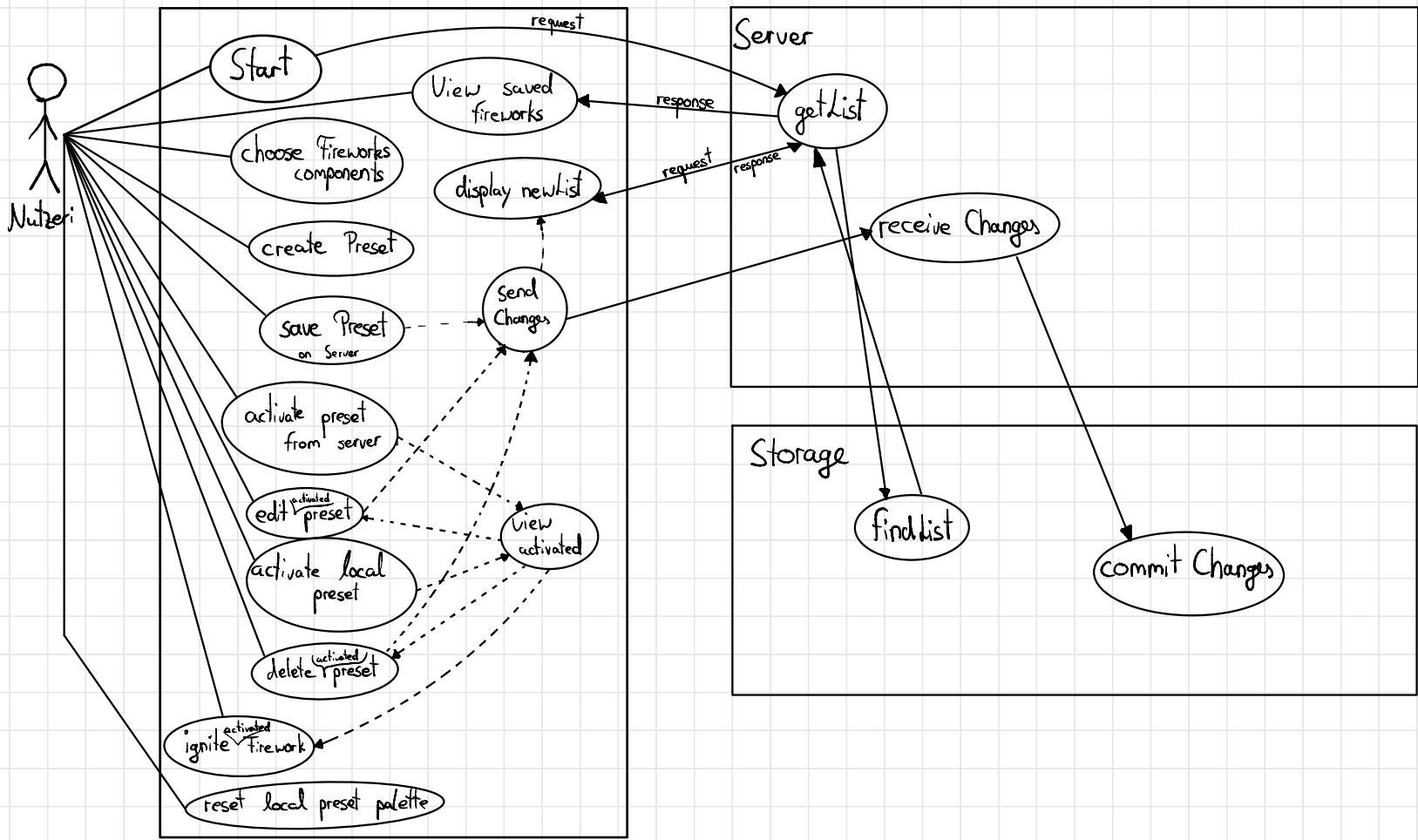
<canvas>
width = "800"
height = "55"
>click



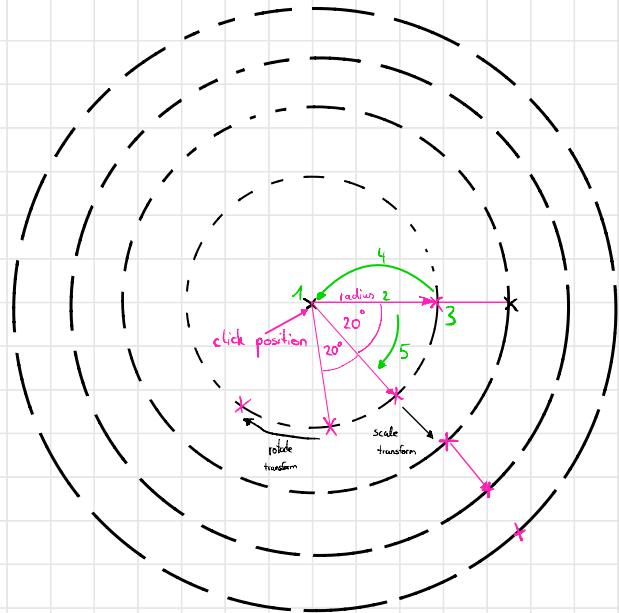
<button>
type = "reset"
id = "reset"
>click

id = "listElement" + index
>click

Use-Case - Diagram



Firework: Canvas - Scribble: Circle

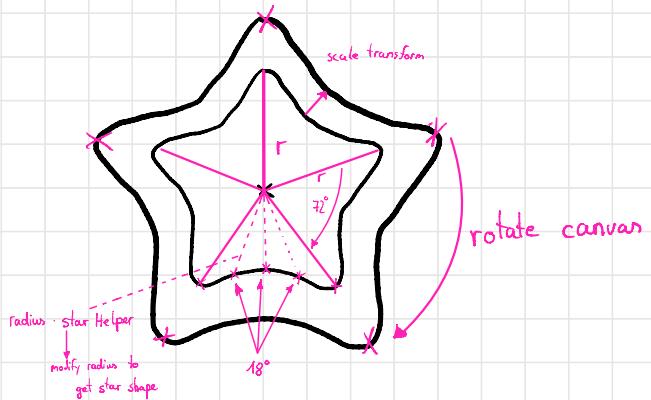


radius grows with every frame

Repeat 4 times,
start with inner
circle and
scale up for
every circle

- 1: Translate to click position
- 2: Translate radius for first Particle
- 3: Draw Particle
- 4: Translate back
- 5: Rotate by 20°
- 6: Repeat Steps 2-5 18 times
→ full circle

Firework: Canval - Scribble: Star



r = radius, grows with every frame

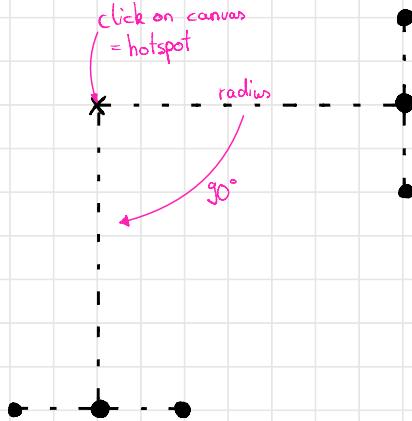
Basically same as circle.

Repeat 4 times,
start with inner
circle and
scale up for
every circle

Draw 4 Particles with
radius \cdot starHelper with 18° between them

rotate by 72° and repeat

Firework : Canvas - Scribble : Cross



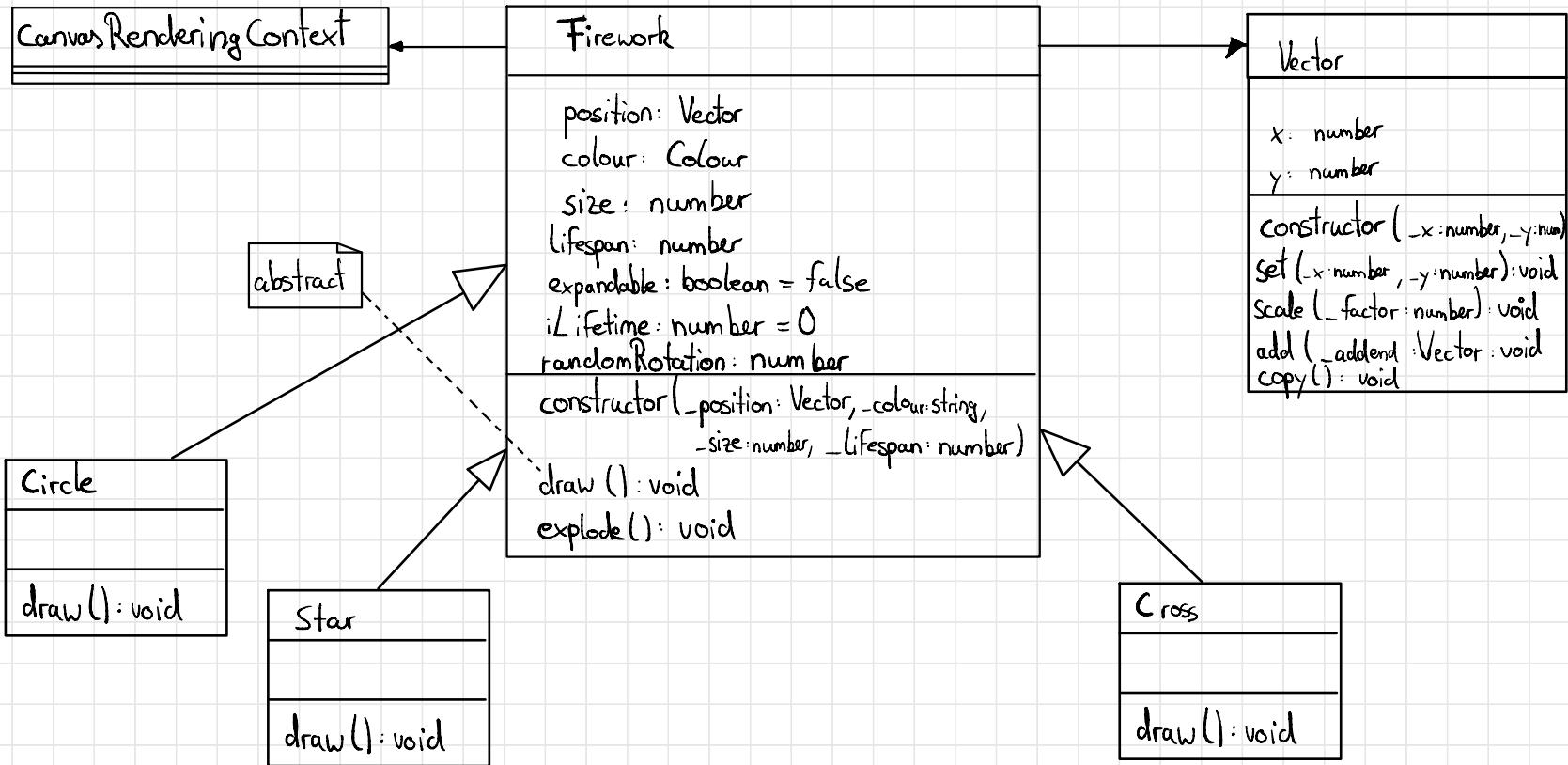
r = radius grows with every frame

Repeat 4 times,
start with inner
circle and
scale up for
every circle

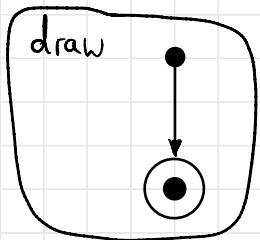
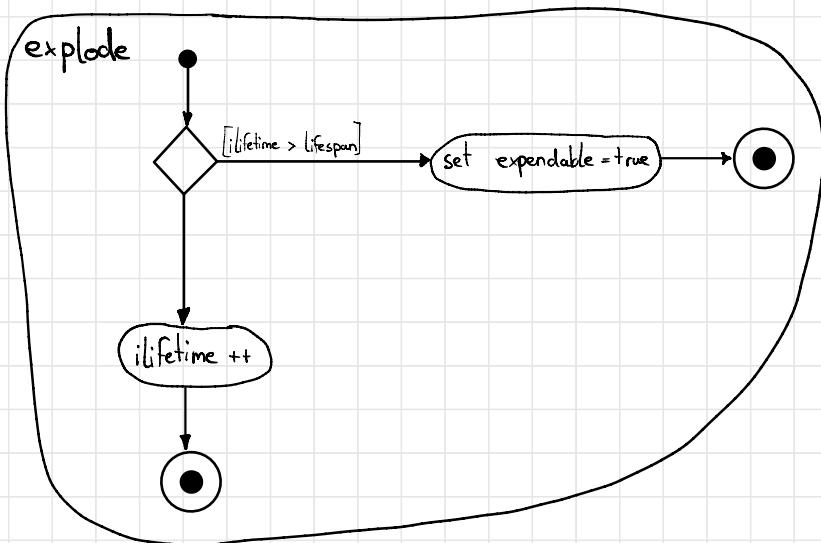
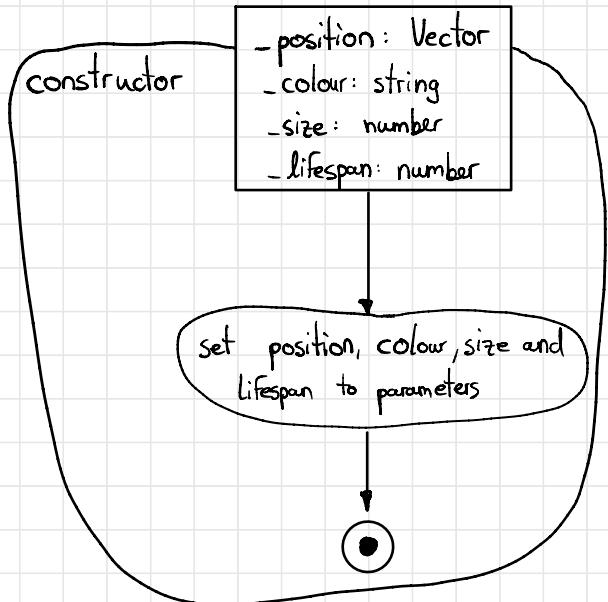
Basically same as circle:

1. Translate radius along x
2. Draw Particle
3. Translate small amount up & down and draw particle
4. Translate back to hotspot
5. Rotate by 90°
6. Repeat 1-5 3 times

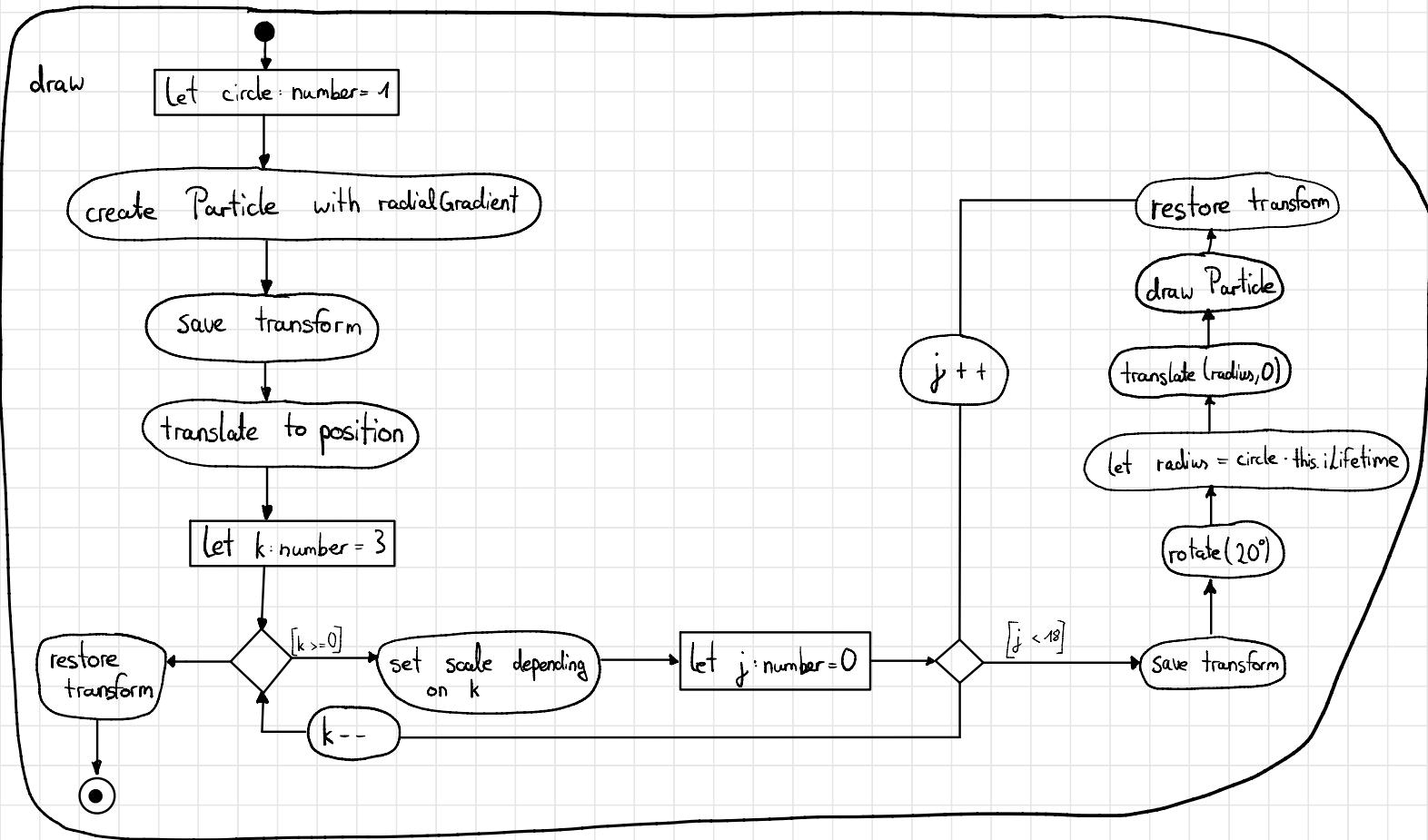
Firework: Class - Diagram



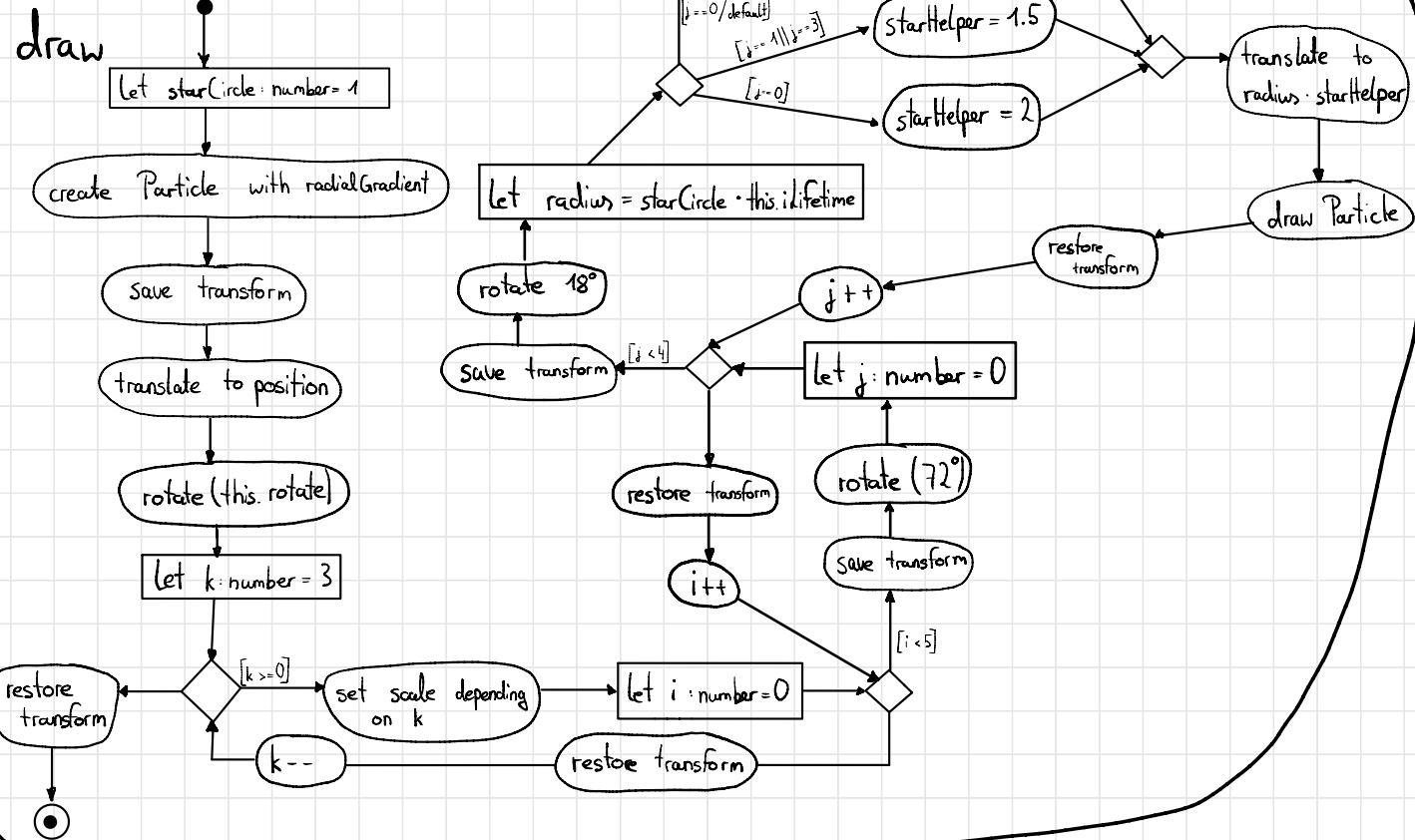
Firework : Activity Diagram - Firework



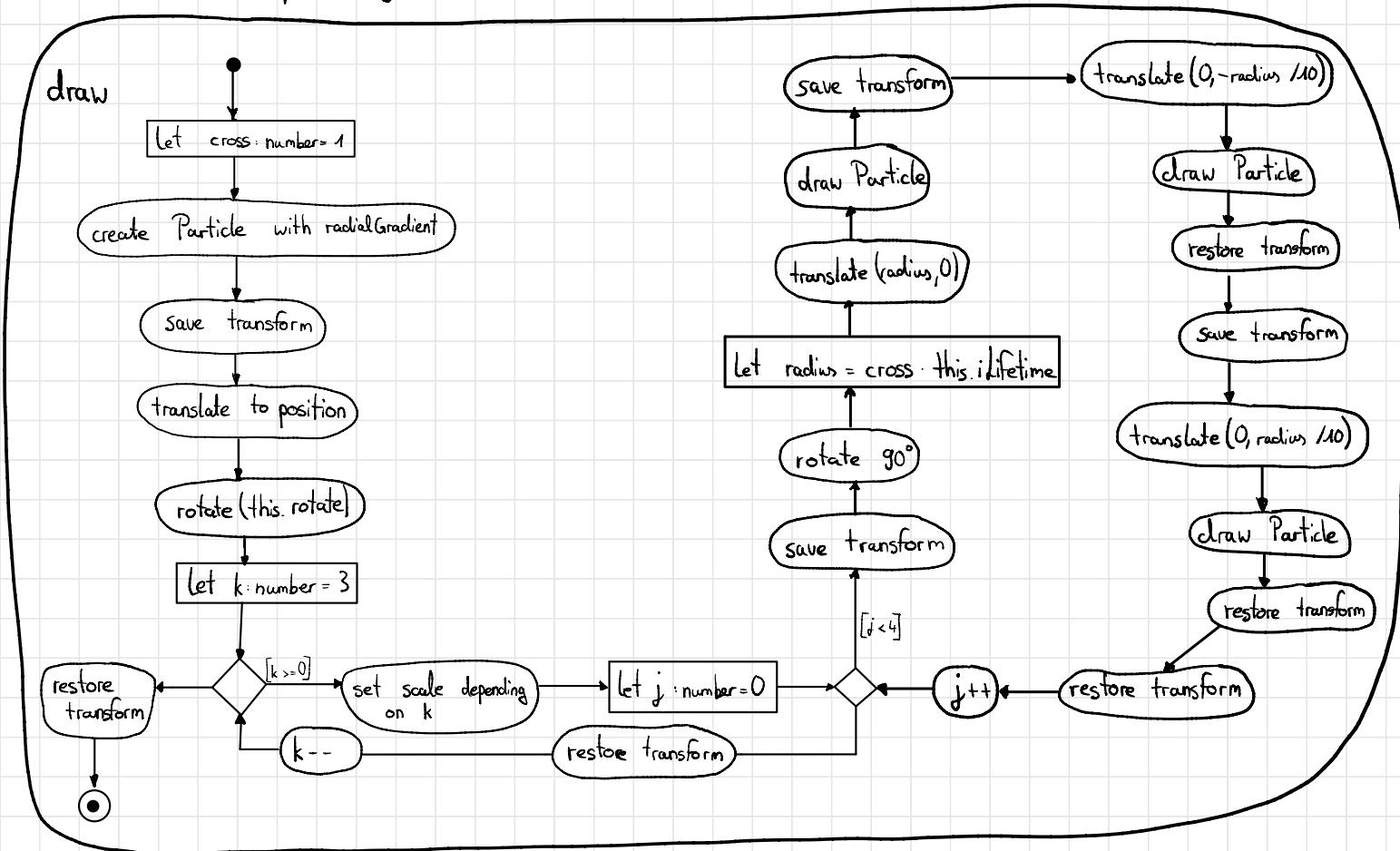
Firework : Activity Diagram : Circle



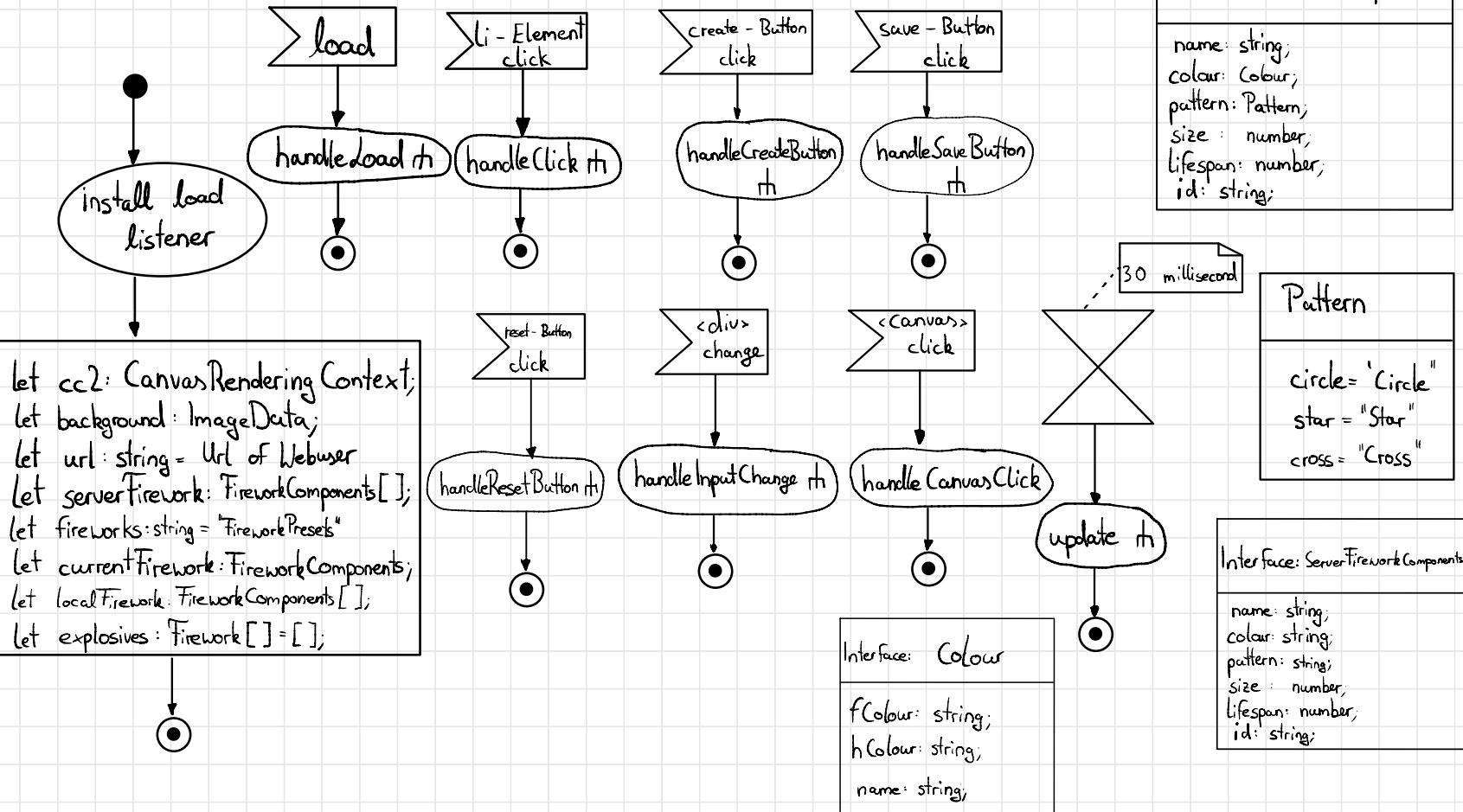
Firework : Activity Diagram : Star

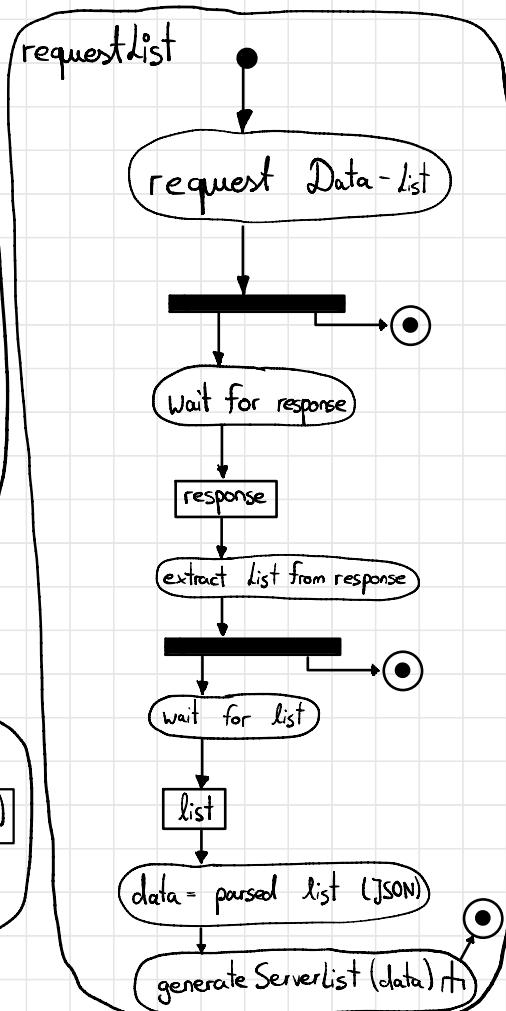
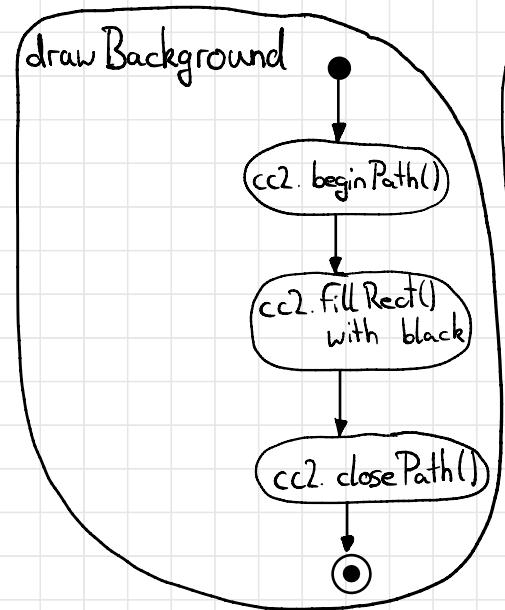
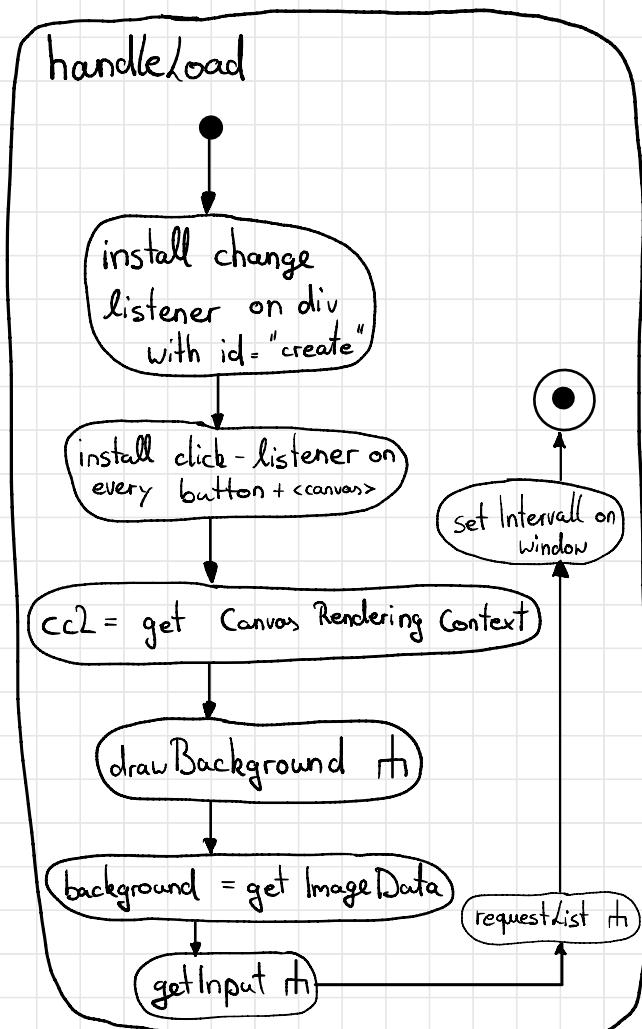


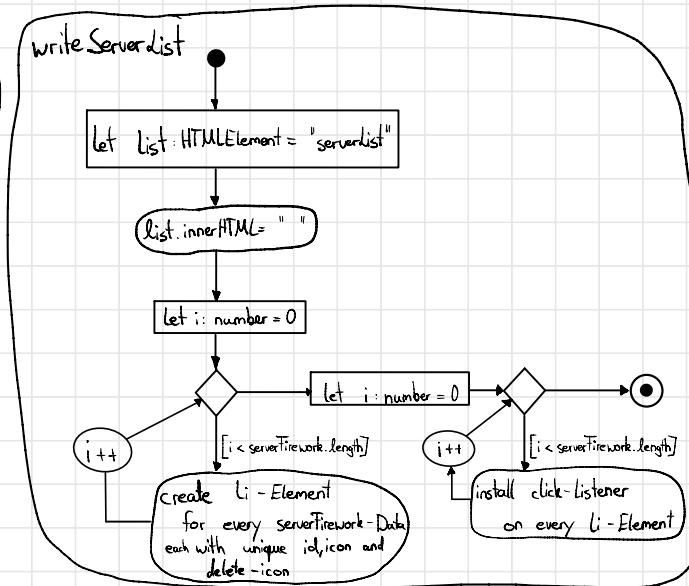
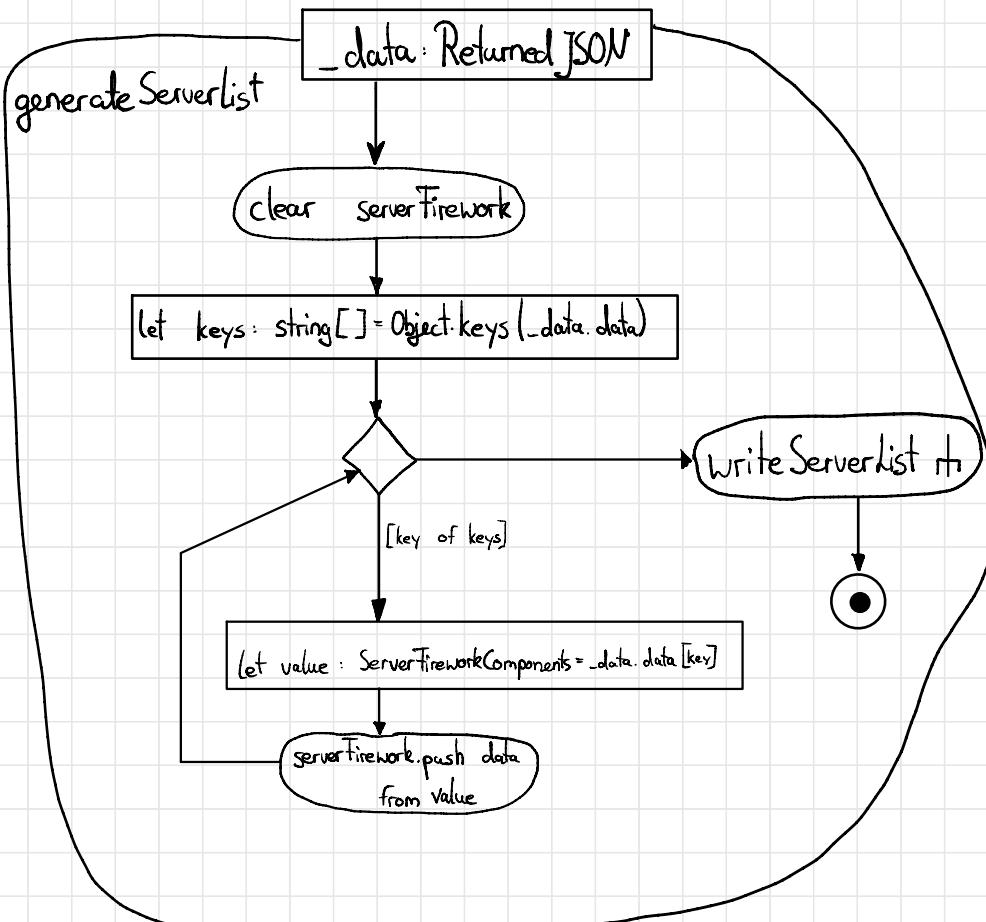
Firework : Activity Diagram: Cross

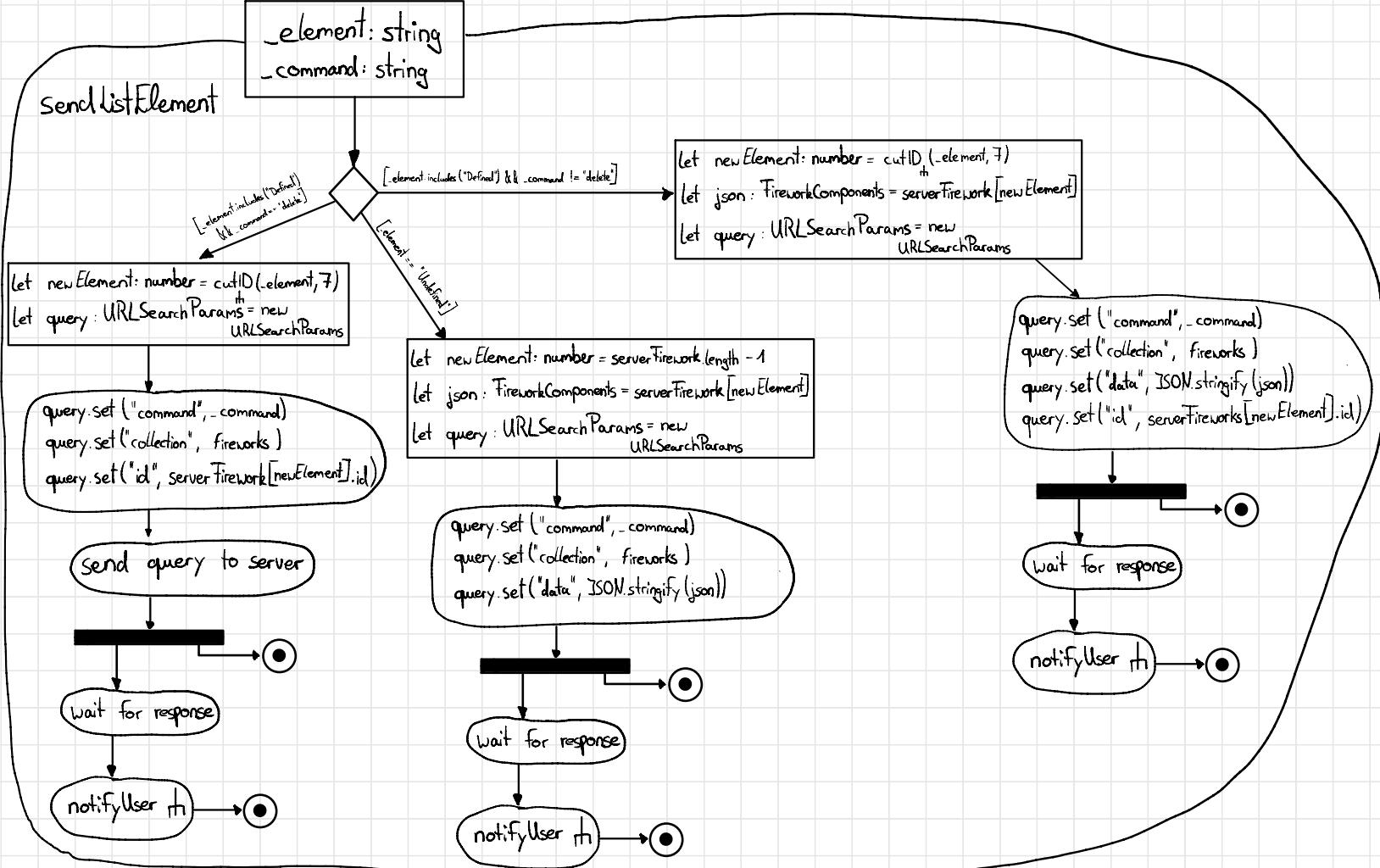


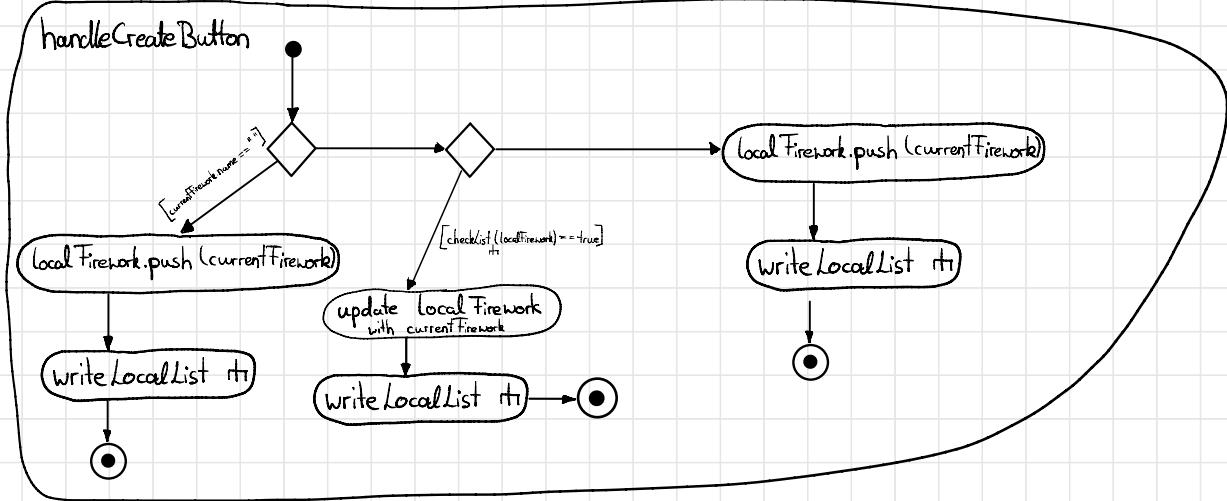
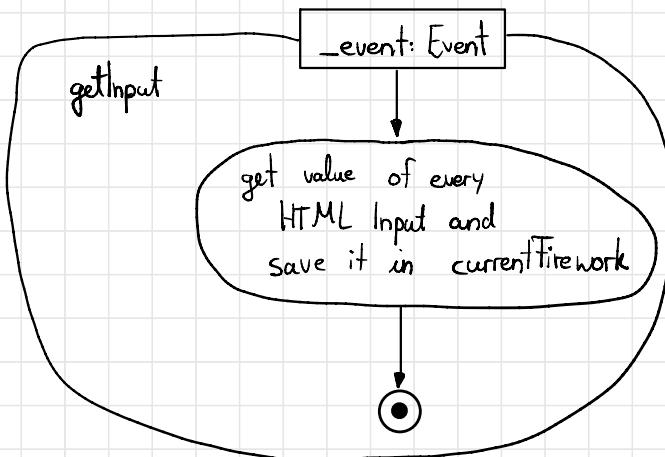
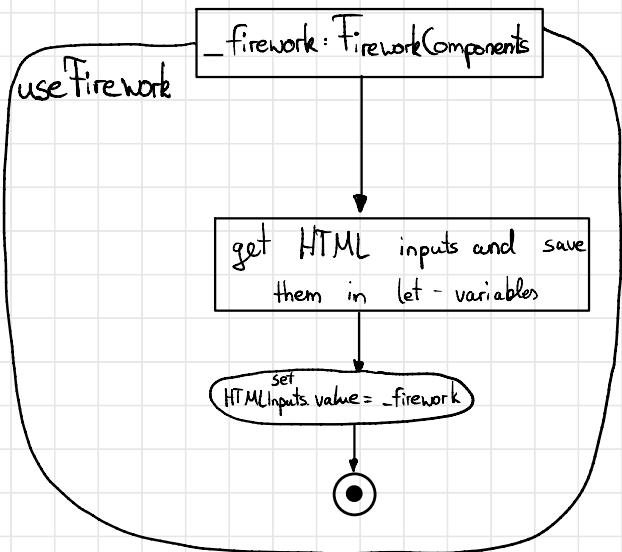
Activity Diagram: Firework



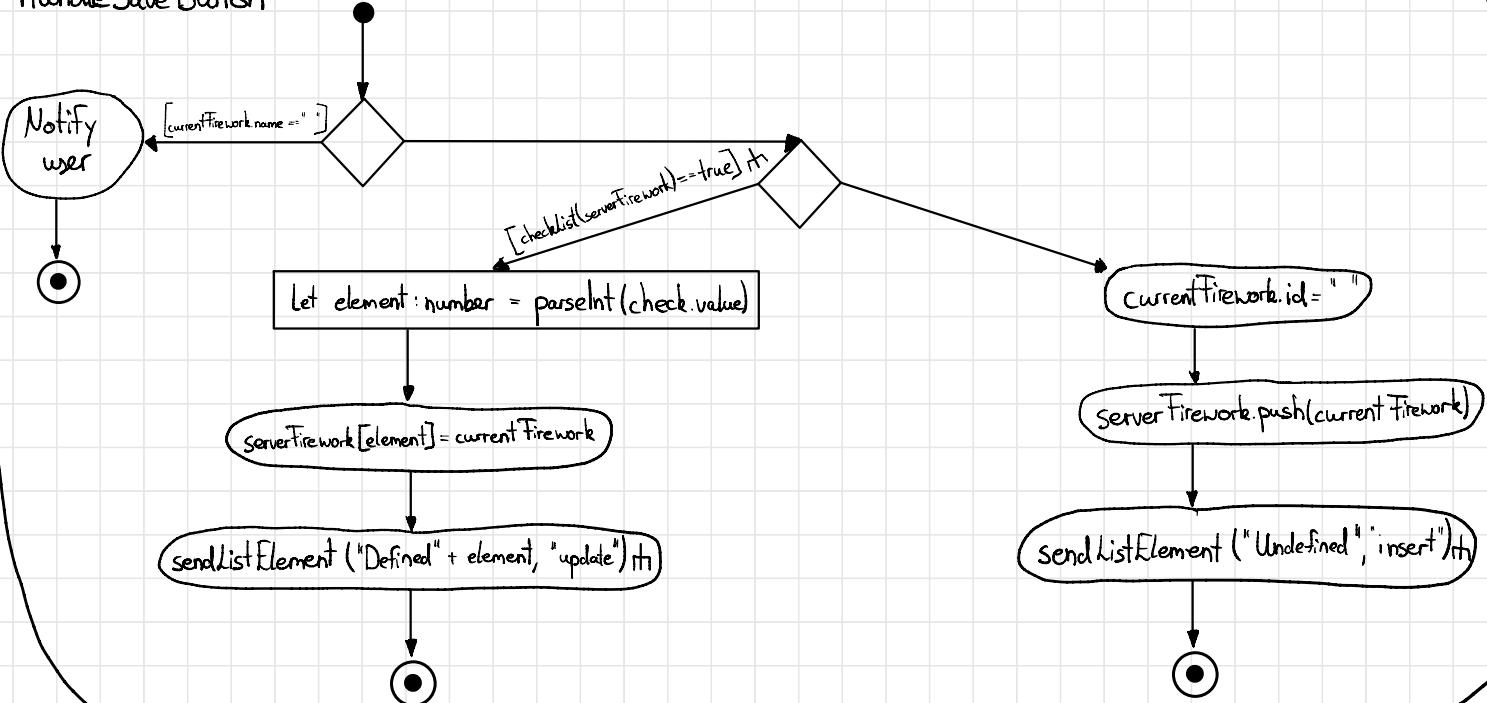








handleSaveButton



writeLocalList

```
let list: HTMLElement = "local list"
```

```
list.innerHTML = "
```

```
let i: number = 0
```

if [i < localFirework.length]

create Li - Element
for every LocalFirework - Data
each with unique id!

i++

if [i < localFirework.length]
install click-listener
on every Li - Element

i++

deleteLocal

```
- place: number  
- quantity: number
```

```
localFirework.splice(-place, -quantity)
```

```
writeLocalList()
```

handleClick

_event: MouseEvent

Let id: string = (_event.target as Element).id

[id includes "local"]



[id includes "server"]
[id includes "sensor"]
[id includes "delete"]

let newID: number = cutID(id, 6)

sendListElement("Defined" + newID, "delete") +



let newID: number = cutID(id, 6)

deleteLocal(newID, 1) +



let newID: number = cutID(id, 3)

useFirework((localFirework[newID]) +



[id includes "delete"]
[id includes "sensor"]

[id includes "server"]
[id includes "local"]

let newID: number = cutID(id, 3)

useFirework(serverFirework[newID]) +



handleCanvasClick

_event: MouseEvent

let hotspot = new Vector
with Event - Position

Create Firework out
of currentFirework
on hotspot



