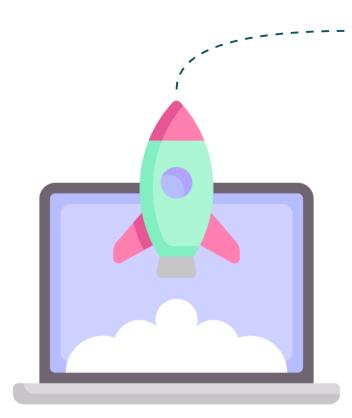
Konzeption

"Rocket Science Center"

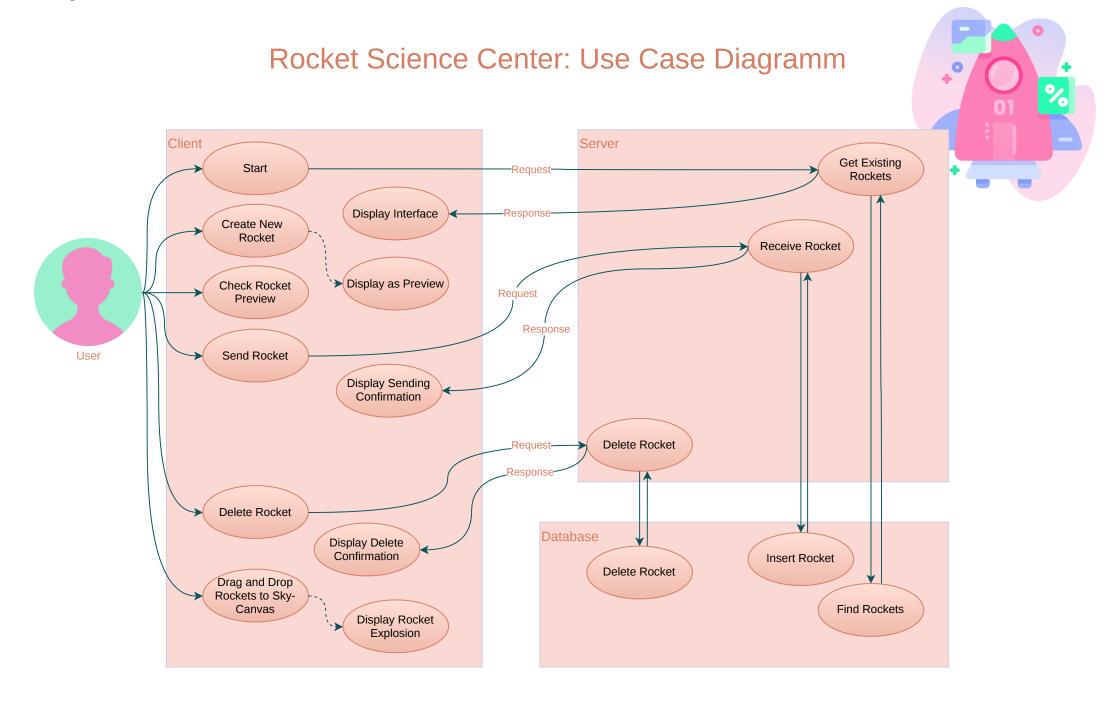
erstellt von Ramona Gihr (Matr.Nr. 262374) im Rahmen der Veranstaltung Entwicklung Interaktiver Anwendungen || im WiSe 2020/21



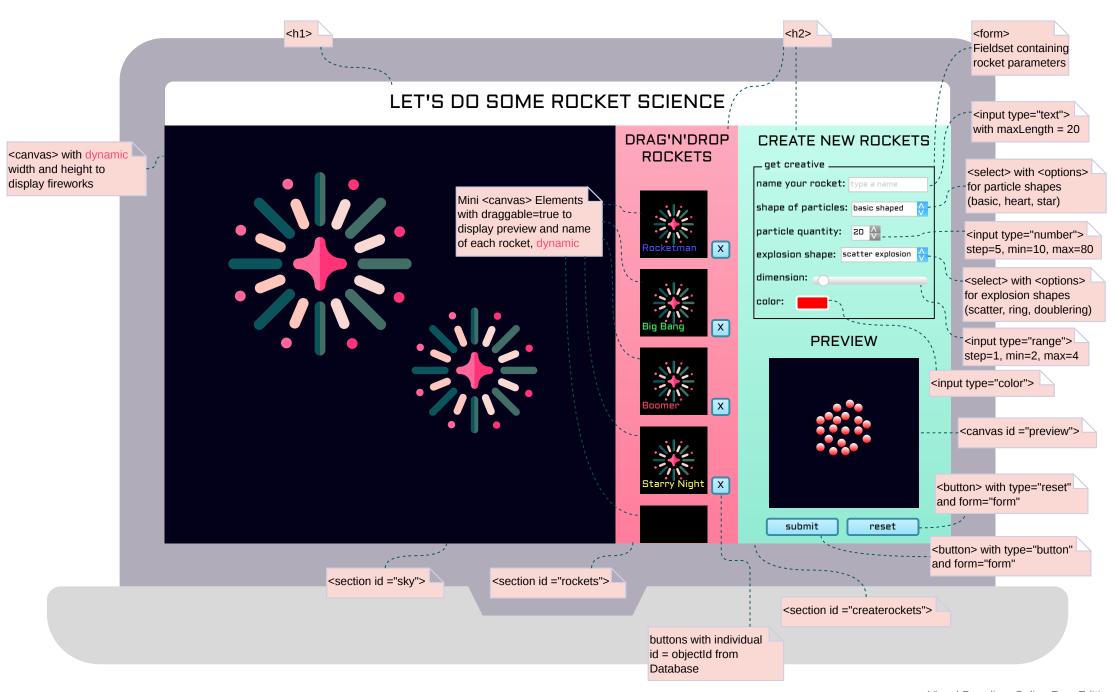
Beschreibung:

Das "Rocket Science Center" ist eine Interaktive Anwendung für den PC, um eigene virtuelle Silvesterraketen zu kreieren. Dazu steht dem Nutzer ein Formular mit verschiedenen verstellbaren Parametern zur Verfügung. Deren Auswirkungen auf die Rakete werden bereits während der Erstellung über eine Preview-Canvas-Fläche visuell dargestellt.

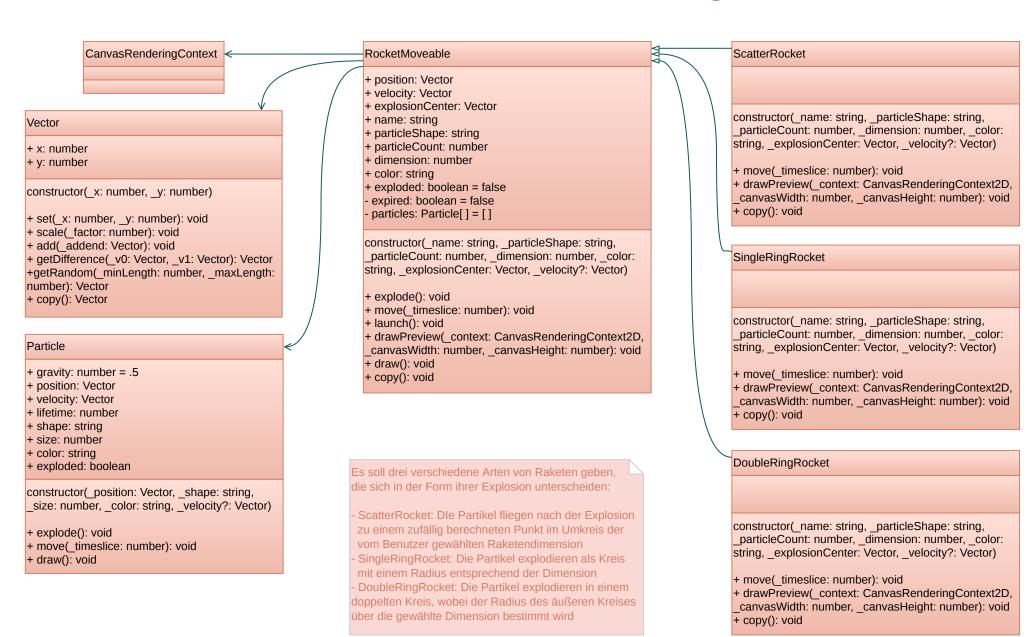
Anschließend können die Raketen über den Server in einer Datenbank gespeichert und somit jederzeit wieder aufgerufen und angepasst werden. Per Drag and Drop lassen sich die Raketen schließlich an eine Stelle auf der dargestellten Himmelsfläche ziehen. Sie fliegen dann vom Boden aus bis zu diesem Punkt und explodieren dort entsprechend ihrer individuellen Parameter.



Rocket Science Center: User Interface

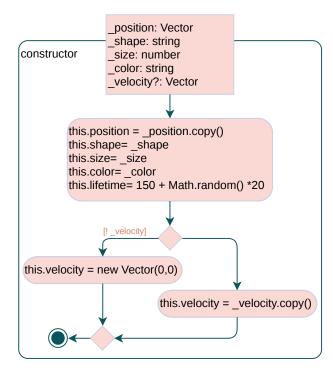


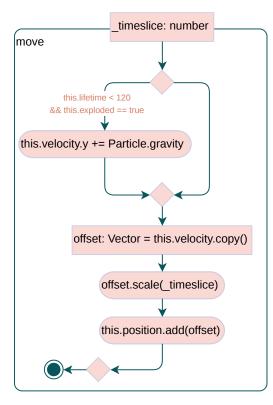
Rocket Science Center: Klassendiagramme

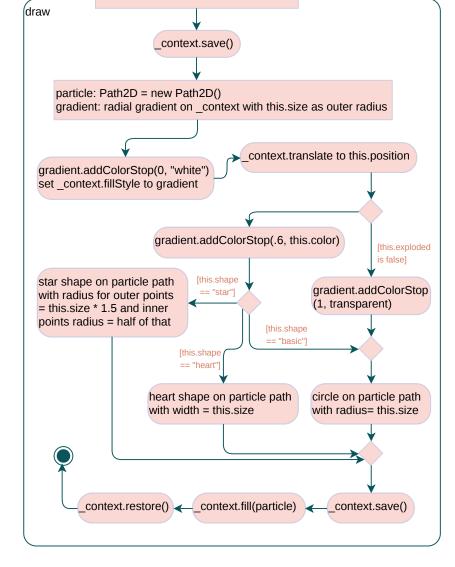


Rocket Science Center: Aktivitätsdiagramme

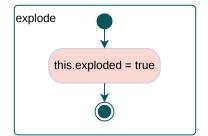
Aktivitätsdiagramme - Particle





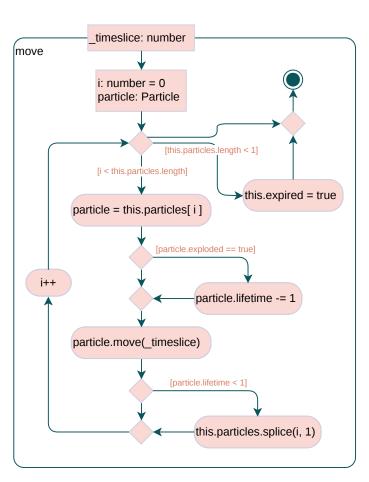


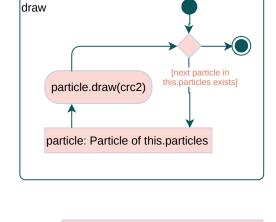
_context: CanvasRenderingContext2D

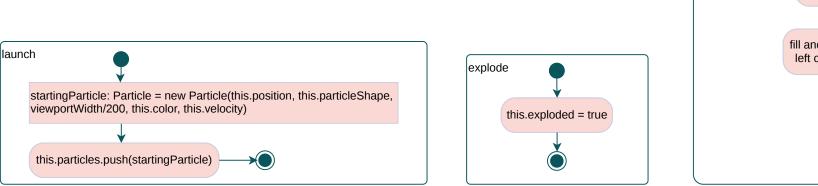


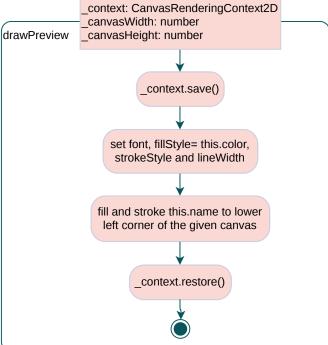
name: string particleShape: string constructor particleCount: number dimension:number color:string explosionCenter:Vector _velocity?: Vector this.name = name this.particleShape=_particleShape this.particleCount= particleCount this.dimension= dimension this.color= color this.explosionCenter= _explosionCenter this.position= new Vector(this.explosionCenter.x, crc2.canvas.height) this.velocity = new Vector(0, -200)

Aktivitätsdiagramme - RocketMoveable

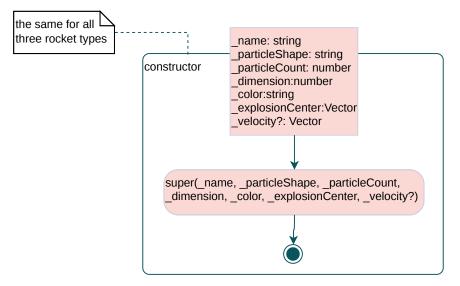


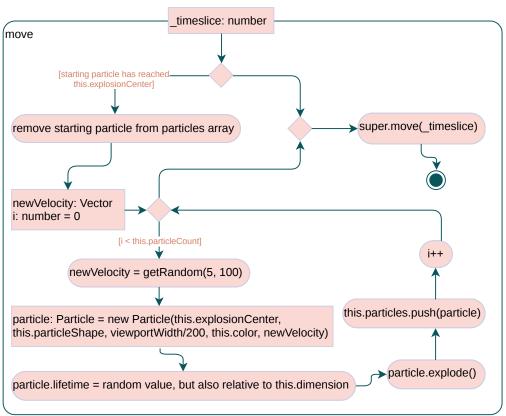


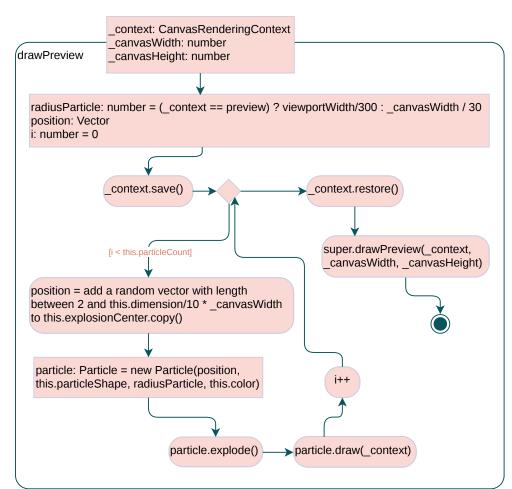


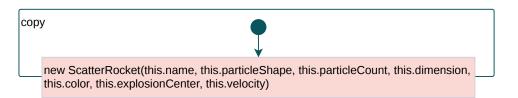


Aktivitätsdiagramme - RocketMoveable Subklassen: ScatterRocket

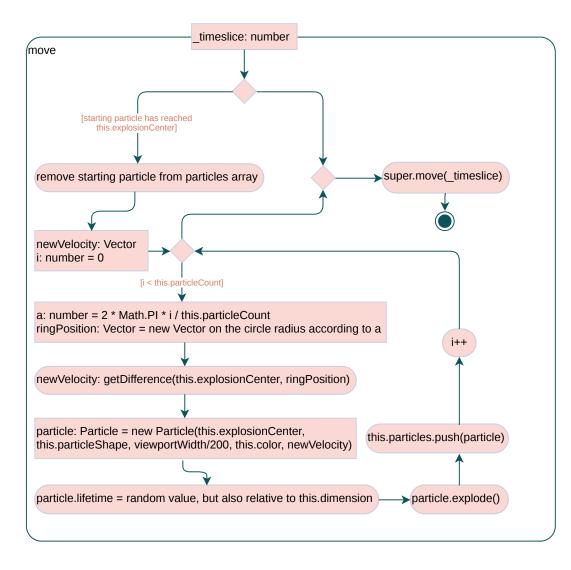


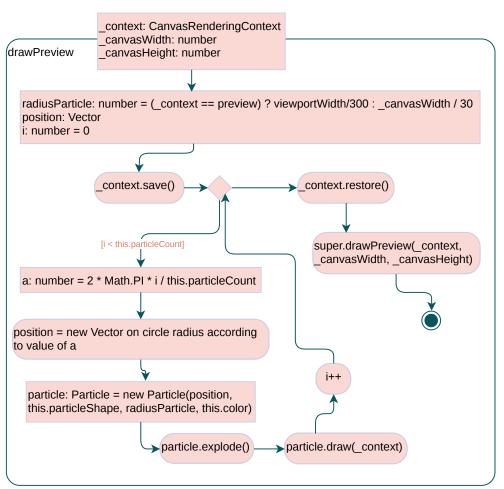


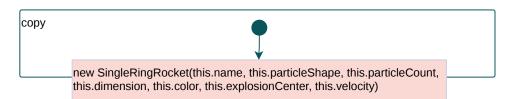




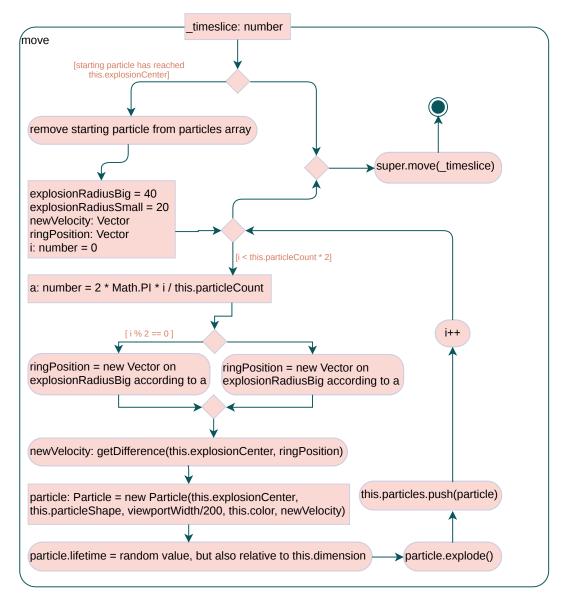
Aktivitätsdiagramme - RocketMoveable Subklassen: SingleRingRocket

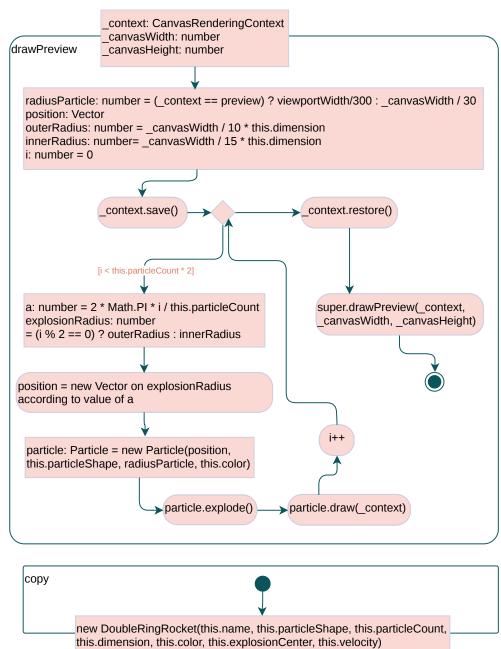


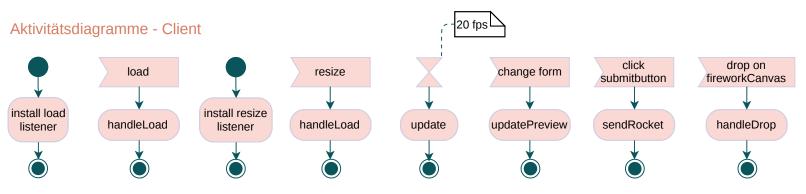




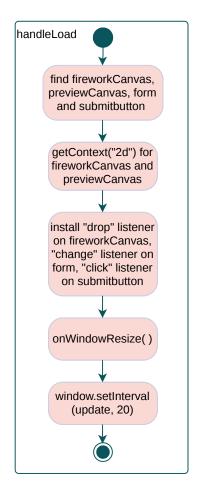
Aktivitätsdiagramme - RocketMoveable Subklassen: DoubleRingRocket

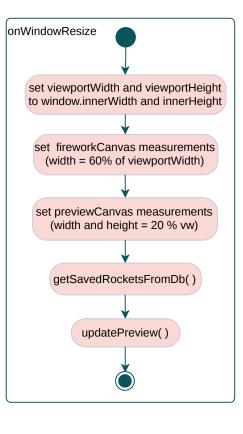


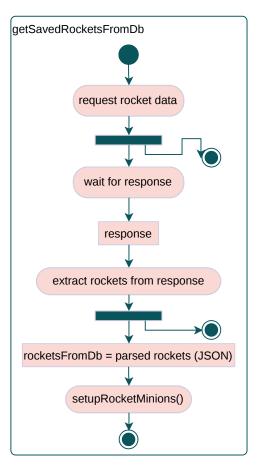


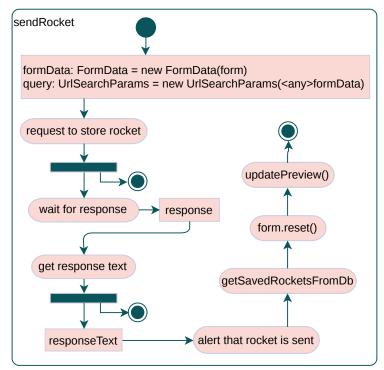


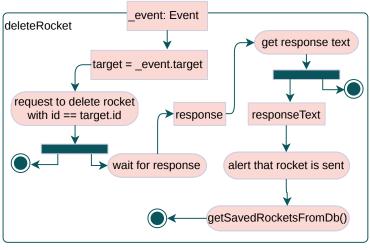
fireworkCanvas: HTMLCanvasElement crc2: CanvasRenderingContext2D viewportWidth: number viewportHeight: number previewCanvas: HTMLCanvasElement previewContext:CanvasRenderingContext2D form: HTMLFormElement rocketminions: Rocket [] = [] rockets: Rocket [] = [] rocketsFromDb url: string = Heroku Link

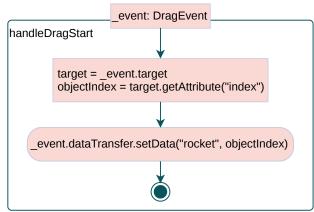


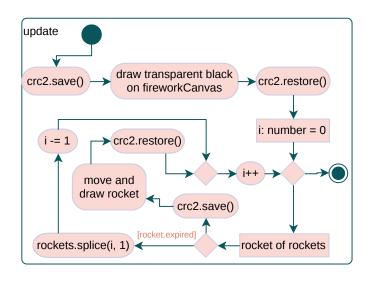


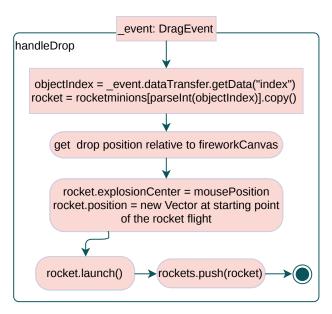


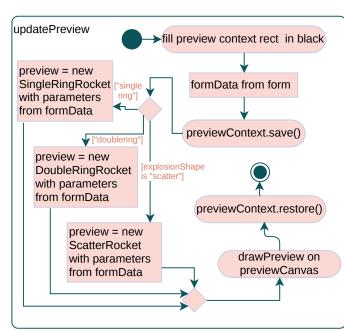


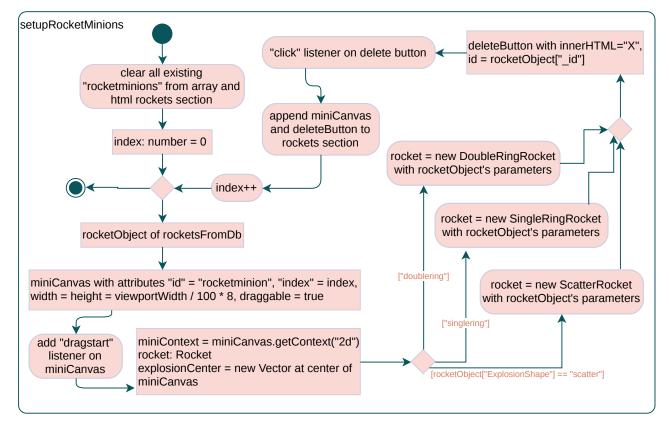












Aktivitätsdiagramme - Server

