Point2D

Attributes
- __id
- __x
- __y
- __v_x
- __v_y

Operations
- setID(id)
- getID()
- getX()
- getY()
- setBewegungsvektor(v_y, v_y)
- getBewegungsvektor()

Line_weighted

Attributes
- __pointID1
- __pointID2
- __weight
- __zyklusNr
- __id

Operations
- getPointID1()
- getPointID2()
- getWeight()
- getZyklusNr()
- getID()
- setID()

Line_move

Attributes
- __pointID1
- __pointID2
- __zyklusNr
- __id

Operations
- getPointID1()
- getPointID2()
- getZyklusNr()
- getID()
- setID()

Dreieck

Attributes
- __pointID1
- __pointID2
- __pointID3
- __id
- __collapseTime

Operations
- setID(id)
- getID()
- getPointID1()
- getPointID2()
- getPointID3()
- getCollapseTime()
- setCollapseTime(time)

Skeleton_Object

Attributes
- __storagePoint2D (array of Point2D)
- __kanten (array of Line_weighted)
- __bewegungsvektoren (array of Line_move)
- __triangulation (array of Dreieck)
- __ListeCycleObjects (array of Cycle_Object)
- __EventList (EventList)
- __skeleton (array of Point-ID = NODES)

Operations
- addPoint2D(Point2D)
- getPointID_byCoordinates(x,y)
- getPoint_byID(id)
- getNumberOfPoints()
- add_line_weighted(Line_weighted)
- getNumberOfLine_weighted()
- getLine_weightedID_byGivenPointID(id)
- getLine_weightedID_byTwoGivenPointID(id1, id2)
- getLine_weighted_byID(id)
- add_Dreieck(Dreieck)
- getDreieck_byID(id)
- addLine_move(Line_move)
- getLine_move_byID(id)
- add_CycleObject(Cycle_object)
- getNumberOfCycles()
- addActivePointID(id, zyklusnr)
- addActiveLine_weightedID(id, zyklusnr)
- addActiveLine_moveID(id, zyklusnr)
- addActiveDreieckID(id, zyklusnr)
- get_storagePoint2D()
- getAllActivePointID(zyklusnr)
- getAllActiveLine_weighted(zyklusnr)
- getAllActiveDreiecke(zyklusnr)
- getAllActiveBewegungsvektoren(zyklusnr)
- getLength_Line_weighted(id)
- getDifference_XandY_Line_weighted(id)
- getNormalenvektor_byLine_weighted_ID(id)
- getOrientatedActivePointIDList(zyklusnr)
- triangulate(zyklusnr)
- moveAllActivePoints(verstricheneZeit, zyklusnr)
- movePointByID(id, zyklusnr)
- get_kanten()
- toGeoJSON(filename)
- toTXT_events_cycles(filename)
- getLine_moveID_byGivenPointID(id)
- calculateCollapseTime_ofActiveTriangles(zyklusnr)
- handle_Event(zyklusnr)
- calculate_Bewegungsvektor_byActivePointID(pointID_list, zyklusnr)
- getDreieck_byTwoGivenPointID(id1, id2)
- getDreieck_byThreeGivenPointID(id1, id2, id3)
- getTotalAreaOfActiveTriangles(zyklusnr=-1)

Cycle_Object

Attributes
- __activePoints (array of IDs)
- __activeKanten(array of IDs)
- __activeBewegungsvektoren (array of IDs)
- __activeDreiecke(array of IDs)
- __laufzeit(Zeit t)

Operations
- addActivePointID(id)
- addActiveLine_weightedID(id)
- addActiveDreieckID(id)
- addActiveBewegungsvektor(id)
- getAllActivePointiD()
- getAllActiveLine_weighted()
- getAllActiveDreiecke()
- getAllActiveBewegungsvektoren()
- setVerstricheneZeit(time)
- getVerstricheneZeit()
- removeActivePointID_byID(id)
- removeActiveLine_weightedID_byID(id)
- removeActiveLine_moveID_byID(id)
- removeActiveDreieck_byID(id)

Event

Attributes
- __id
- __status
- __timeOfOccurance
- __zyklusnr
- __dreieckID
- __pointsID (array of 1-2 IDs)
- __type

Operations
- determine_Eventtyp()
- setStatusFinished()
- setID(id)
- getID()
- getStatus()
- getTimeOfOccurance()
- getZyklusNr()
- getDreieckID()
- getPointIDList()
- getType()

EventListe

Attributes
- __events (array of Event)

Operations
- addEvent(Event)
- updateEvent(id)
- getEvent_byID(id)
- getAllEvents()

returnObject

Attributes
- message
- status
- value (optional)
- valueList (optional)

Operations