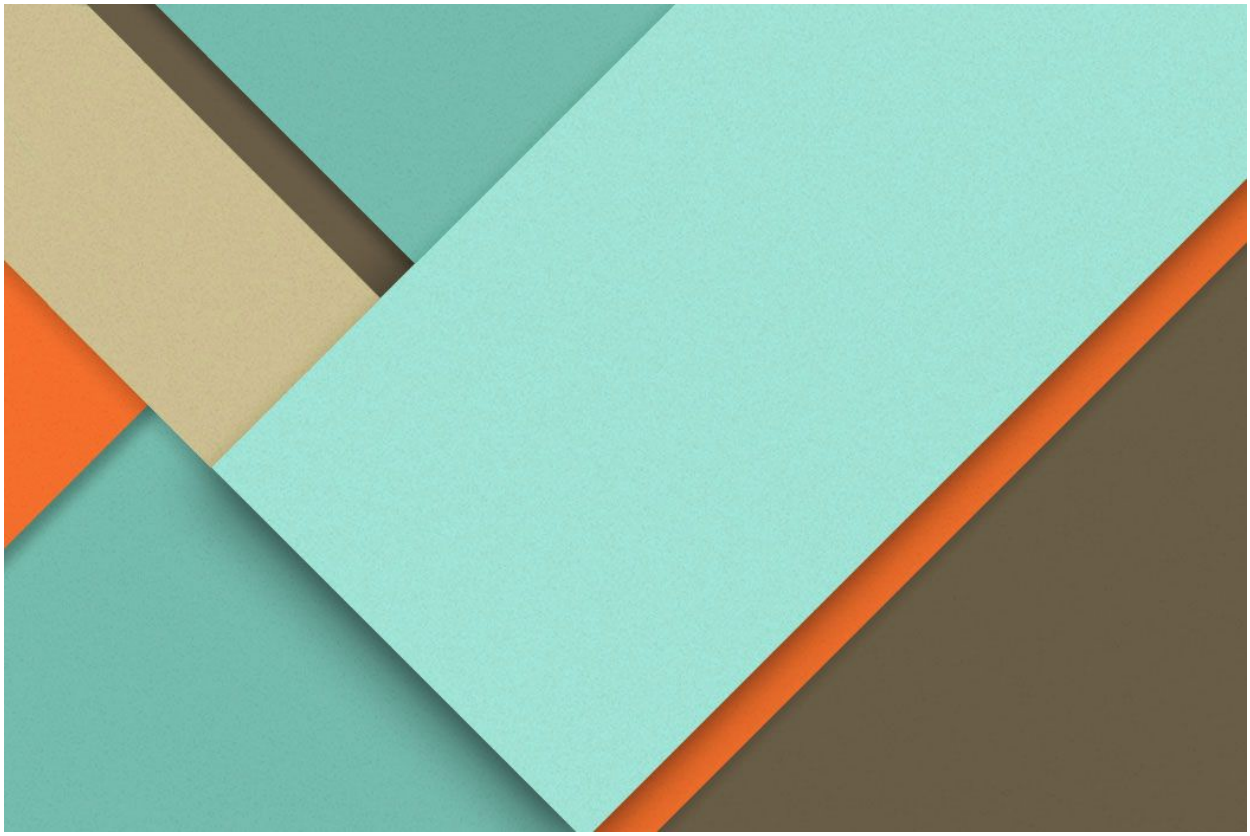

Basic Movements

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Movements - General

In this projects are 4 basic movements implemented:

- Determined Movement
- Random Movement
- Tracking Movement
- Pattern Movement

Before explaining each one a few things in general:

All movements are in an infinite loop, the possibility to change the loop types and is number is added but not used.

The tracker movement does not use a path, instead it takes the mouse position as his target to calculate the direction.

There's a bug where the app is closed when the mouse is not on the window, it won't happen all the time, and the moves work correctly, but still dont know its cause.

All 4 movements are presented in the same window:

- Up-left = Determined
- Up-Right = Random
- Down-left = Tracker
- Down-Right = Pattern

Path must be initialized and filled before the agents, if the agent has not a next target different of his position it will disappear (glm takes the vector 0, 0 and when normalized it became nand, nand)

Determined move

This move has the points preloaded, it wont use the initial position given and doesn't have to make extra calculation when the points are given.

When all the points are reached, it starts over again.

Random Movement

This move calculate 50 random points between the min and maximum given, then add them to the vector normal.

When all the points are reached, it starts over again.

Tracker Movement

This move calculate the direction all the time with the mouse position, mouse must be in the screen otherwise the app will shut down.

This move doesn't add the points to a path, and doesn't ask for the next point, it will follow beyond the bounds of its space.

Pattern Movement

This move calculate the point using an initial position and directions, the points are relative to its position so changing this will change the points

When all the points are reached, it starts over again.