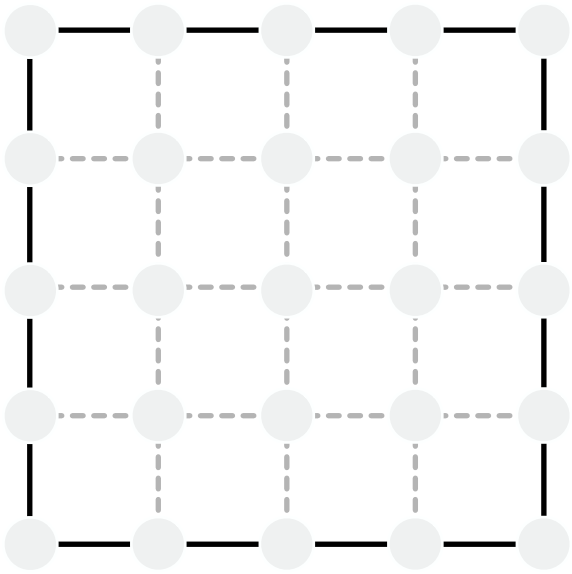

Fig 1. Begin with a blank 2D array which represents a map. It can be viewed as a graph with each node representing a single tile

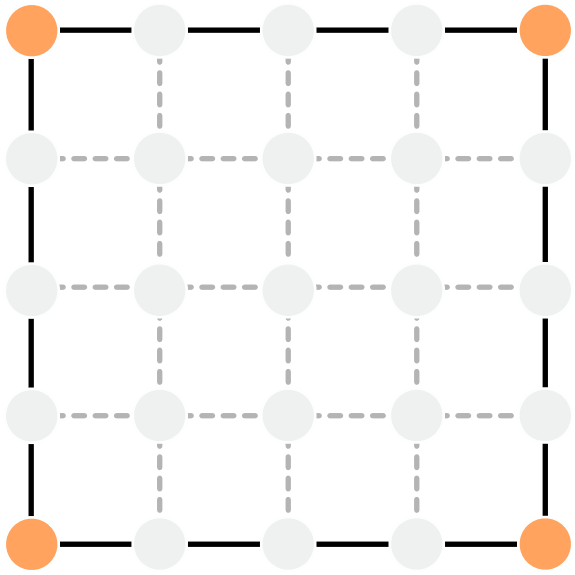

Fig 2. Take the four corner nodes of the map and assign them a given seed value (in our case -1500 to force a continent-like map) which will influence the rest of the map

The Square step

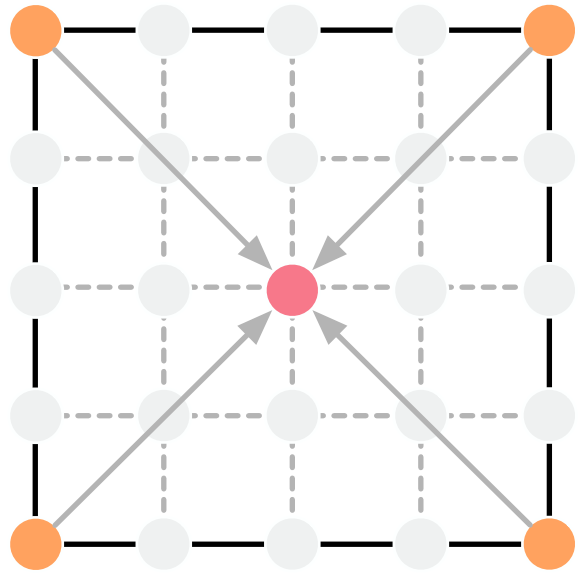

Fig 3. Take the ***mid point*** between all four nodes and assign it the average of the four corner nodes ***plus another random value.*** This gives us a ***square shape*** with a middle point.

The Diamond step

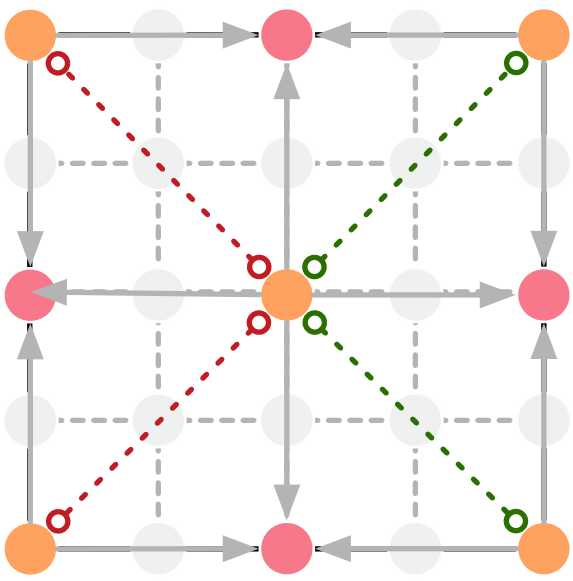

Fig 4. Take the middle of each corner-to-corner edge from the previous square step (the pink nodes above) and assign them the average of all surrounding nodes in a ***diamond*** shape (in the above graph, the red and green dotted lines represent half-diamonds) plus a random value.

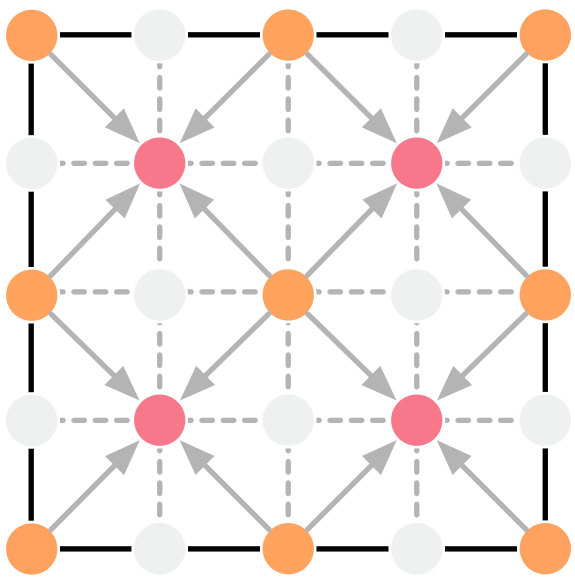

Fig 5. The result of the previous step is another square (the orange nodes above). Therefore we now do the square step again.

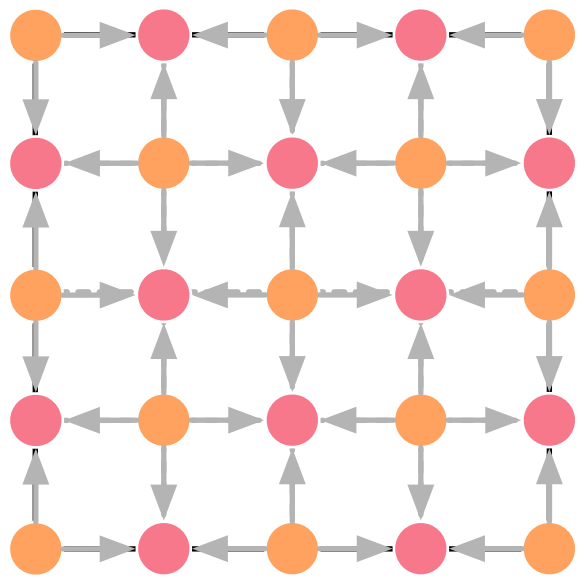

Fig 6. As before, the result of the previous step is a diamond shape surrounding each of the pink nodes. Therefore we complete the diamond step one more time.

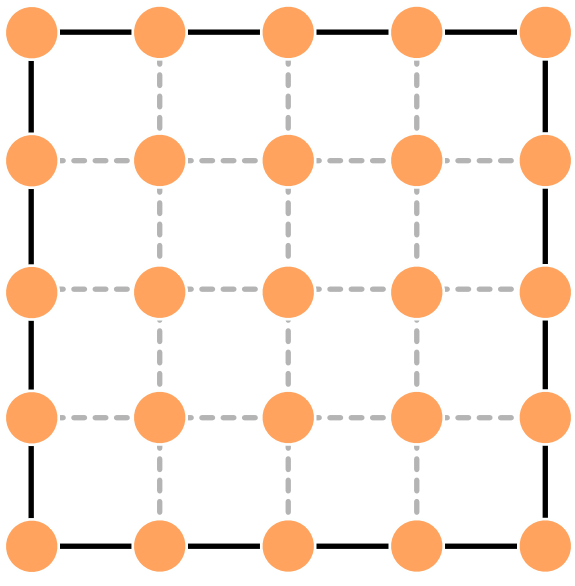

Fig 7. We have our complete tile grid!