

Graph (Abstract class)

const unsigned dimension
vector<int> weight //Adjacency matrix represented as a vector
vector<T> nodeValues //Template vector

index(int i, int j) :maps 2d indexing to 1d representation
changeNodeValue(int i): modify the state of nodeValues(i) //Abstract

SpinLattice

+ const unsigned coordination numbers
vector<Spin> spin

+InitRectangularLattice()
InitSpin()



IS A



HAS A

Spin

int value //-1 or 1

setSpin()
flipSpin() // Implements changeNodeValue()

SimulationModel (Abstract class)

abstract Graph

vector<float> simulate(float beta)



IS A

IsingSimulation

Lattice

float hamiltonian(float coupling)