In this code test we will ask you to create a rudimental economy system for a city building application. For this we have provided you with a Unity project and two scripts for scriptable objects:

* ResourceObject.cs – This holds data relevant to a specific type of resource,
* And ResourceProcess.cs – This holds data on “ingredients” needed to create an output resource.

You will also notice you have been provided with 5 instances of ResourceObjects: Wheat, Milk, Flour, Bread and Cake. Using these, we ask you to try your hand at these tasks:

Required:

* Create ResourceProcesses to create each resource with the relevant ingredients:
  + Nothing for one Wheat,
  + Nothing for one Milk
  + Use 5 Wheat to make one Flour,
  + Use 2 Flour to make one Bread,
  + Use 3 Flour and 2 Milk to make one Cake.
* Implement a system that would create each resource over a set amount of time.
* Create production buildings (4 game-objects) that will produce these resources:
  + Wheat Farm for the Wheat,
  + Dairy Farm for the Milk,
  + Mill for the Flour,
  + And a Bakery for both Bread and Cake
* Implement a Stockpile system to be used by each production building.

Please also take note of how much time overall this application took to implement.

Optional:

* Create new resources, processes and production buildings for a new series of resources, the names for these we leave to your discretion.
* Improve the code structure of the “ingredients” in a process.
* Create functionality for toggling a Bakeries production between Bread and Cake.
* Add an additional “Cheese” resource for the Dairy Farm to produce (and allow for toggling between Milk and Cheese similar to the Bakery if you implemented a system for that).
  + Create a new process for the production of Cheese from the Dairy Farm and another process for the production of sandwiches in a Bakery using Bread and Cheese.
* Create a “Cart” object that could carry resources between buildings.
  + Apply simple pathfinding to these carts so they may avoid travelling through building objects etc.
  + Apply pathfinding to the carts that will allow them to avoid other carts.

We appreciate your participation and look forward to seeing the resulting application and how you approached the tasks presented.

Please return zipped Unity project via WeTransfer or similar.