# Candidate Take Home Exercise

## Overview

In this coding exercise you will write working production ready code following coding best practices, code cleanliness, and developer workflow. You may use any language, framework, and/or libraries to facilitate your work. You can choose how you want to solve the requirements and may approach this exercise as a RESTful API, a collection of Classes and methods, or any other approach you find applicable. You can assume you will have a database instance and connection but we want to see how you would interact with the connection. You should include some tests in your code but 100% code coverage is not necessary.

You should spend no more than two hours on this exercise. We are not looking for 100% feature completion, our goal is to get insight into your work behavior and thought process. Please take the time to review the exercise and ask questions before beginning your work. When you are done please provide us a link to your repo.

## Description

- We are an eCommerce retailer selling plants directly to customers from our website. We want to develop an internal application to help facilitate purchasing plants from vendors which we then sell to our customers.
- A Purchase Order is a request from our company to a vendor for a quantity of plants which are received into Inventory in a normal time window of approximately two weeks.
- A Purchase Agreement is a long-term agreement with a vendor to receive multiple deliveries, via child PO's, that can be distributed over the life of the PA.
- To receive an PO we simply need to acknowledge the PO has been received and update our Inventory of plants available for sale so that we can sell the oldest plants received first.
- To receive plants from a PA we must first create a child PO with a quantity less than the parent PA quantity and the total sum of all children PO quantities must not exceed the PA total quantity. We can then receive the child PO as a normal PO.

## We want a system that allows the following:

- Create a PA
- Create a PO
- Create a PO related to a PA
- Receive a standard PO

- Receive a PO that is related to a PA

## Assumptions:

- Plants always healthy
- We receive the sizes we ordered
- 1(PA) to many (PO) relationship