COMP3900/9900

2022 Term 2

Custom/Own Project Request Form

Custom/Own Project Description:

Our group is proposing to build an inventory and parts management system for any small engineering or manufacturing business. This idea is born from the current issues that 3/5 of the team members in this group experience on a daily basis in the Sunswift Racing project - thus making the project more relatable and relevant.

The inventory management system will enable different types of users to login to the platform and manage a hierarchy or parts and their associated metadata. Additionally, users will have differing permissions, roles, dashboards and actions. For example, some users may only be able to request the purchasing of parts, whereas some users will be able to approve / deny purchase requests.

Parts can take a variety of forms, and fit together in a hierarchy; To be specific, parts can either be of type installation, assembly or component where installations can only assemblies as children, assemblies can have other assemblies or components as children and components cannot have any children. I.e. Installations are the root level and children are the leaf level of the tree dependency graph.

Furthermore, parts (of any level) can either be proprietary (off the shelf) or designed and built internally to the company. In the case of a proprietary part being added to the parts list, a purchase request should be made to the administrator / purchasing agent of the team. In the case of a custom part, the platform should be able to store specific metadata about the part and also store a local copy of any engineering drawing that is associated with the part. Not every part will need a purchase request (i.e. parent assemblies / installations may not need anything specific to be purchases as it is composed of children parts which will either be purchases or made in-house).

For any part (either off-the-shelf part or raw material that is requested), a user should be able to track the status of the request, and once purchases, should be able to track the delivery status if it is from a supported supplier.

(up to 10) Custom/Own Project Objectives (must include at least 8 objectives including, at least, 2 functional novelties with respect to existing related systems):

1. User can request a part to be ordered or can add parts that don't need to be ordered. All parts contain a suite of associated metadata and have hierarchy.
2. Parts can be attached to individuals in the platform.
3. The parts hierarchy can be views in a simple list format with customisable detail. (E.g. Only installations, only assemblies relevant to me, only components that have been approved, all parts)
4. Managers can view and manage (approve / deny) purchase requests
5. Managers can receive a notification / daily digest of actions on the platform.
6. Users can view a dashboard of their parts and any new updates to the orders since they last logged in. Manages can view a dashboard of outstanding requests.
7. Users can live track/be notified of the status of their request (pending, approved or denied)
8. Parts must contain sufficient metadata to describe the system, i.e. if the part is custom, it should support the storage or linking to engineering drawings.

Novel

9. Users can live track the location of their order / delivery. If parts are ordered from a supported supplier, users can view the order & delivery status directly in the platform.
10. When ordering from a supported supplier, users can simply enter the supplier part number, which will automatically populate part-specific attributes (name, brand, price etc.)

COMP3900/9900 Submission Terms and Instructions:

Understand the terms below, fill in all fields on this submission request form, and email your completed form to your mentor/tutor.

By submitting this request:

- Each team member confirms that all work the team submits for this project will be the team's own original work created solely for this course, that it has not been copied from any other source, and that it has not been used or submitted in any other context by any team member.
- Each team member commits to completing the project based on these (at least) **eight** (**8) objectives** (subject to approval, and including any mentor/tutor amendments made), and agrees that all feedback to be considered is to come from the mentor/tutor who acts as the client for this project, or from the lecturer.

Group Name: New World

	Full Name	**zID**
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