YARN SWAP

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Project Proposal

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Title
Yarn Swap

Project Type
Independent

Project Category
Progressive web application & CI/CD Pipeline

Proposal
The problem:
In the craft community, people often buy more craft supplies than they will ever need. With yarn crafts like knitting and crochet, this is sometimes known as SABLE - meaning **S**tash **A**cquisition **B**eyond **L**ife **E**xpectancy. This is a bit of a problem but is deepened when you require yarn for a project but don't have it in your stash, so you buy more. You end up with unused, sometimes quite expensive yarn.

The solution:
What if you could get rid of the yarn that you no longer wish to use and exchange it with another person in a similar situation who also has yarn they no longer need? What if you could swap for the yarn you need for an upcoming project or the perfect yarn you have been searching for? Enter Yarn Swap! Yarn Swap is a web application that allows you to connect with other yarn lovers in order to reduce your stash but still find the yarn you need.

Proposed functionality:
The following items are subject to change following project research completion.

- Members of the public can browse yarn swap listings.
- Each listing will contain detailed information about the available yarn including images. Details will include colour, weight, fibre content, brand, amount in grams and possibly others.
- You can sign up and log in.
- As a logged-in user, you can
    - Create/read/update/delete listings.
    - Update/delete your account.
    - Earn tokens. The exact details here are to be decided.
    - Tokens are then used to buy yarn from other users.
    - Postage is paid for by the person requesting the yarn, using Paypal/Revolut/Stripe.
    - Rate/review users you have received yarn from.
    - Request specific yarn if you can't find it. (Wishlist)
    - Stash inventory feature - List all yarns but mark relevant ones as swappable. Only those marked can be seen by other users.

- Advice section where members can ask for advice on projects and yarn selection.
- CI/CD Pipeline using Jenkins to run deployment of application including automated testing.
- The application can be downloaded to your device for use offline (Progressive Web App).

The backend API will be written using Golang and the Gin Web Framework. The frontend UI will be written using ReactJS, with ChakraUI. Firebase will be used for authentication and possibly also as a database. The application will be deployed to OpenShift. Jenkins will be used to create the CI/CD pipeline for the project.
It is proposed that the project be completed in 2-week sprints and will follow an agile methodology using a Trello kanban board for planning.

Technologies, Tools & Frameworks
Golang
Gin Web Framework
ReactJS
ChakraUI
Firebase
Balsamiq
Figma
Openshift/RHOAM/Kubernetes
Jenkins
Goland
VS Code
Trello
Canva

Process (all at once, or releases)
The project will be released in stages, approx 3 releases.

Stakeholders
- The craft community