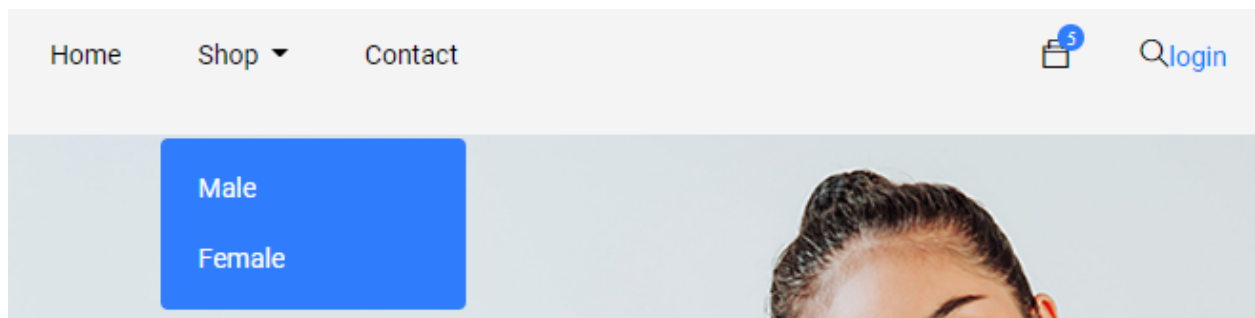# Final Project Proposal

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We are planning to create an online shopping website. The navigation bar will contain 5 buttons: "Home", "Shop", "Contact", "Shopping Cart", and "Login". The "Home" button will load the home page. The "Shop" button is a dropdown button. When the mouse hovers over the button, the dropdown menu will appear and display 2 sub buttons, "Male" and "Female". "Male" will load the clothing page for male, "Female" button will load the clothing page for female. The "Contact" button will load the customer support page, which will contain an interactive map that uses a map API. The "Shopping Cart" will display a list of items the user has added to the cart. The "Login" button will show the user a login screen with boxes for the user to fill in email and password which will be validated using WTForms for data processing. Each page will be managed by separate controllers each with different templates.

Upon login, the user will be prompted for a username, password, and their shopping preference by category. The user data will be saved before the end of the session and will be restored upon login using Flask-Login plugin. The data saved will be the items in the cart, and time spent on the site. User sessions will be automatically logged out after some time. Four SQL tables will be used to keep track of popular items, shopping recommendations based on user's

shopping preference, the number of items in stock, and the shopping cart of each user. We calculate the popularity of an item by counting the number of users who added that item into the shopping cart. The item with the highest count will be displayed on the home page using the carousel feature of Bootstrap. At the bottom of the popularity section, shopping recommendations will be displayed. Shopping recommendations are tabulated by the categories chosen by the user, where those products in the categories will be shown. For this project, when the page first loaded, all items will have the same quantity in the inventory. We keep track of the inventory of an item by counting the number of users who added that item to the shopping cart. The quantity of that item will decrease by 1 when a user adds that item into the shopping cart. When the quantity reaches 0, the website will no longer list that item. When items are added to the user's shopping cart, the user shopping cart table will update and include the items and display them accordingly when the shopping cart tab is open.