Midterm

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CIS-25 C++

Explanation

- Clothing management system
- Saves running list of all your shirts and pants
- Ability to add more through C++ program or through txt file for mass changes
- Randomizer to select a random outfit or a color-matching set
- Keeps track when clothing is dirty and a way to set them all to clean after laundry-day

Concepts Used

- Data types and data sizes: class, int, string, vector, bool
- File types: c++, header, txt
- Use of pointers: pointers for displaying / searching
- Arrays: Dynamic vector array to allow user to store data
- Search: matching string variables combined with checking a bool to match up outfits. Also, a randomized search through the array
- File I/O: save/load to a txt file for long-term tracking
- Classes: OutfitManager to handle overall program. Base classes for pants and shirts to handle storing variables, return, and output

```
--- Outfit Manager Menu ---
1. Display Closet
2. Add Clothing
3. Do Laundry
4. Save to closet.txt
5. Load from closet.txt
6. Search Outfit by Color
7. Random Clean Outfit
0. Exit
Enter your choice: 1

---- Shirts ----
Type: T-shirt, Color: Blue, Clean: Yes
Type: Polo, Color: Red, Clean: No
Type: Tank top, Color: Yellow, Clean: No
---- Pants ----
Type: Jeans, Color: Blue, Clean: Yes
Type: Shorts, Color: Red, Clean: No
Type: Sweatpants, Color: Yellow, Clean: Yes

--- Outfit Manager Menu ---
1. Display Closet
2. Add Clothing
3. Do Laundry
4. Save to closet.txt
5. Load from closet.txt
6. Search Outfit by Color
7. Random Clean Outfit
0. Exit
Enter your choice: █
```

```
Enter your choice: 2

Is this a shirt or pants? shirt
Enter type (e.g. T-shirt, Jeans): test
Enter color: Blue
Is it clean? (y/n): y

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5. Load from closet.txt
6. Search Outfit by Color
7. Random Clean Outfit
0. Exit
Enter your choice: 1

---- Shirts ----
Type: T-shirt, Color: Blue, Clean: Yes
Type: Polo, Color: Red, Clean: No
Type: Tank top, Color: Yellow, Clean: No
Type: test, Color: Blue, Clean: Yes
---- Pants ----
Type: Jeans, Color: Blue, Clean: Yes
Type: Shorts, Color: Red, Clean: No
Type: Sweatpants, Color: Yellow, Clean: Yes
```

```
Enter your choice: 4

Closet saved to closet.txt.
```

```
Enter your choice: 3

Laundry Day! All clothes are now clean.

--- Outfit Manager Menu ---
1. Display Closet
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5. Load from closet.txt
6. Search Outfit by Color
7. Random Clean Outfit
0. Exit
Enter your choice: 1

---- Shirts ----
Type: T-shirt, Color: Blue, Clean: Yes
Type: Polo, Color: Red, Clean: Yes
Type: Tank top, Color: Yellow, Clean: Yes
Type: test, Color: Blue, Clean: Yes
---- Pants ----
Type: Jeans, Color: Blue, Clean: Yes
Type: Shorts, Color: Red, Clean: Yes
Type: Sweatpants, Color: Yellow, Clean: Yes
```

```
Enter your choice: 5

Closet loaded from closet.txt.

--- Outfit Manager Menu ---
1. Display Closet
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4. Save to closet.txt
5. Load from closet.txt
6. Search Outfit by Color
7. Random Clean Outfit
0. Exit
Enter your choice: 1

---- Shirts ----
Type: T-shirt, Color: Blue, Clean: Yes
Type: Polo, Color: Red, Clean: No
Type: Tank top, Color: Yellow, Clean: No
Type: test, Color: Blue, Clean: Yes
---- Pants ----
Type: Jeans, Color: Blue, Clean: Yes
Type: Shorts, Color: Red, Clean: No
Type: Sweatpants, Color: Yellow, Clean: Yes
```

```
Enter your choice: 6

Enter color to search for matching outfit: Blue

Matching outfits for color 'Blue':
Outfit: Type: T-shirt, Color: Blue, Clean: Yes
Type: Jeans, Color: Blue, Clean: Yes

Outfit: Type: test, Color: Blue, Clean: Yes
Type: Jeans, Color: Blue, Clean: Yes
```

```
Enter your choice: 7

Random Clean Outfit:
Type: T-shirt, Color: Blue, Clean: Yes
Type: Sweatpants, Color: Yellow, Clean: Yes
```

Challenges

- Researched and implement dynamic arrays so user can add to on-going list

- Adding in a menu for user prompts snowballed into multiple ideas being added as I worked.

- Re-wrote main and outfitManager so many times as I was 99% finished. Realized I had a lot of functions and handling inside the main menu, and should moved them over into outfitManager, then figuring out how to tweak them to work properly.