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M2 Capstone Project: Algorithms and Design in UML

ACTIVITY DIAGRAM

Diagram

Description automatically generated

STRUCTURE DIAGRAM

Diagram

Description automatically generated

**Main Algorithm**

1. The user starts program.

2. Main menu of options is displayed.

a. Study Deck

b. Create Deck

c. Edit Deck

d. Delete Deck

3. User selects action from Menu.

a. **Study Deck**

1. The user must then select a deck.

a. a list is output of available decks.

b. if no deck exists the user will be informed no decks available and the program will return to main menu.

c. the user will select from the list.

d. using a case statement the selected deck will be chosen and then run through the available cards in the deck.

2. When the user selects a deck they are then given the option to reverse the order of which side of the card is shown to begin with, front or back. They also can shuffle the deck. Finally they can just start the program of cycling through the cards.

1. While the study program is running, the user can:

a. go to next card

b. reverse to the other side

c. Hide card from deck

d. quit to main menu

b. **Create a Deck**

1. The user is prompted to name the deck.

2. A deck is created with the name given by the user.

a. the user then begins creating cards to fill the deck.

3. the user is prompted to enter a string for the front of the card.

4. The user is then prompted to enter a string for the back of the card.

5. the user is prompted if they want to create next card, or finalize creating.

6. When the user chooses to finalize creating the deck, the program returns to main menu.

c. **Edit Deck**

1. Available decks are displayed to the user and they must choose one to edit.

a. If none are available, the program will prompt user no decks exist and exit to main menu.

2. After choosing a deck, the cards in the deck will be cycled through.

a. In edit mode, the user is shown the front and back of the card and they can then choose to delete the card, or edit the front or back, or go to next card, or finish editing and go to main menu.

d. **Delete deck**.

a. after selecting this option the user will be shown available decks to delete.

b. After selecting the deck, the deck will be deleted.

c. The deck list will be updated and prompt the user with the new list.

d. the user can delete another deck from the list or exit to the main menu.