OBJECT ORIENTED ANALYSIS AND DESIGN Assignment

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Instructions:
1. One can use any open source and/or proprietary software for the construction of UML state-chart-diagram. Hand drawn diagrams on a A4 sized paper are also allowed.
2. Use the concepts covered in the class for construction of an optimized diagram.
3. Copy cases direct/indirect (identified if any) will be awarded zero marks.

Draw a state chart diagram for the following application description:
Consider an online shopping website which sells books on different subjects. The user interface of their web application has three different modes. In the first mode, that is, *search-browse-choose* (*sbc*) mode the user can perform the following:
- View a precompiled list of books like bestsellers, food, stories, etc.
- Search for books by author name, or keywords in the title of the book.
- User can retrieve another list while viewing one list.
- The user can click on a book to get its description (ISBN, Author, Title, Year, Pages, Price etc.).
- The user can add the item they are viewing in the shopping cart or move back to the list they were browsing.
- The user can switch the *sbc mode* to *decide-and-order (do) mode*.
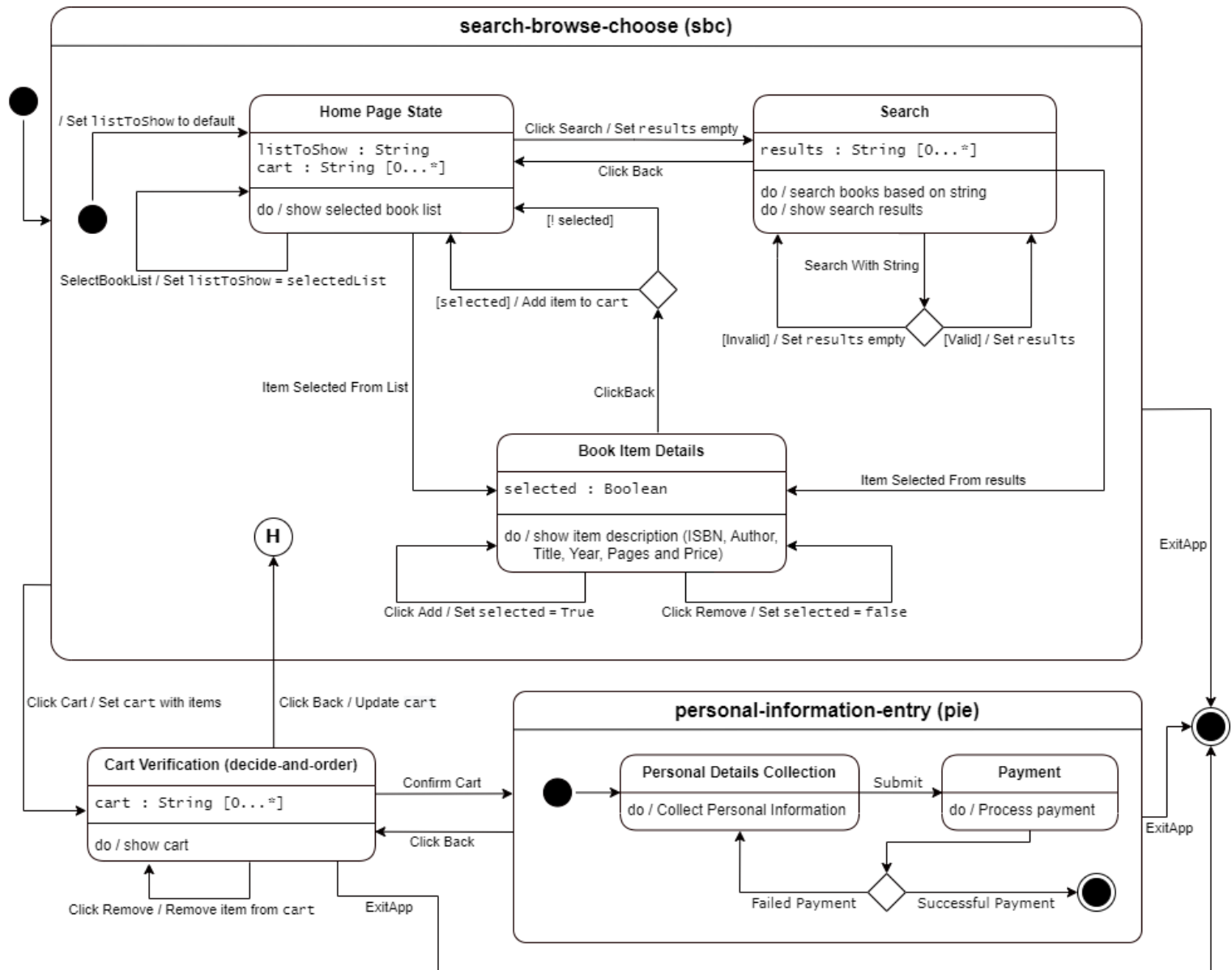
In the *do mode*, the user is requested to verify his/her cart. In this mode the user can leave the cart as it is or they can remove the added items. Once the users confirm the cart items they switch from *do mode* to *personal information entry (pie) mode*. In the *pie mode*, the user provides his/her personal information for payment and delivery. The application is very flexible and allows the user to switch to previous mode from the current mode or exit.

Submission details:

- draw.io was the Tool used for the state chart diagram.
- All assets (png, draw.io file and this document) can be found in this GitHub repo.

State chart diagram:

More information on states:

- Under the **search-browse-choose (sbc)** super state, we have a *home page state* that shows all the precompiled lists of books by default.
- User can choose a list to see it in the *home page state*.
- User can enter the *search* state from the *home page state* and use a user provided string to search the list for books.
- On valid search we show a list of results and user can choose one item from the result.
- Upon choosing an item, the user can view its details and choose to add to cart or go back to the list.
- Upon clicking on cart, the user goes to the *Cart Verification* state (**decide-and-order (do) mode**).
- Here user can remove any items from cart or confirm cart.
- Upon confirmation, user can provide personal details for payment and delivery in the **personal-information-entry (pie) mode.**
- On submitting the details, the *payment* state processes the payment. Upon successful payment we terminate, else we go back to the *personal details collection* state.
- The user can choose to go to the previous state at any point of time or even terminate.