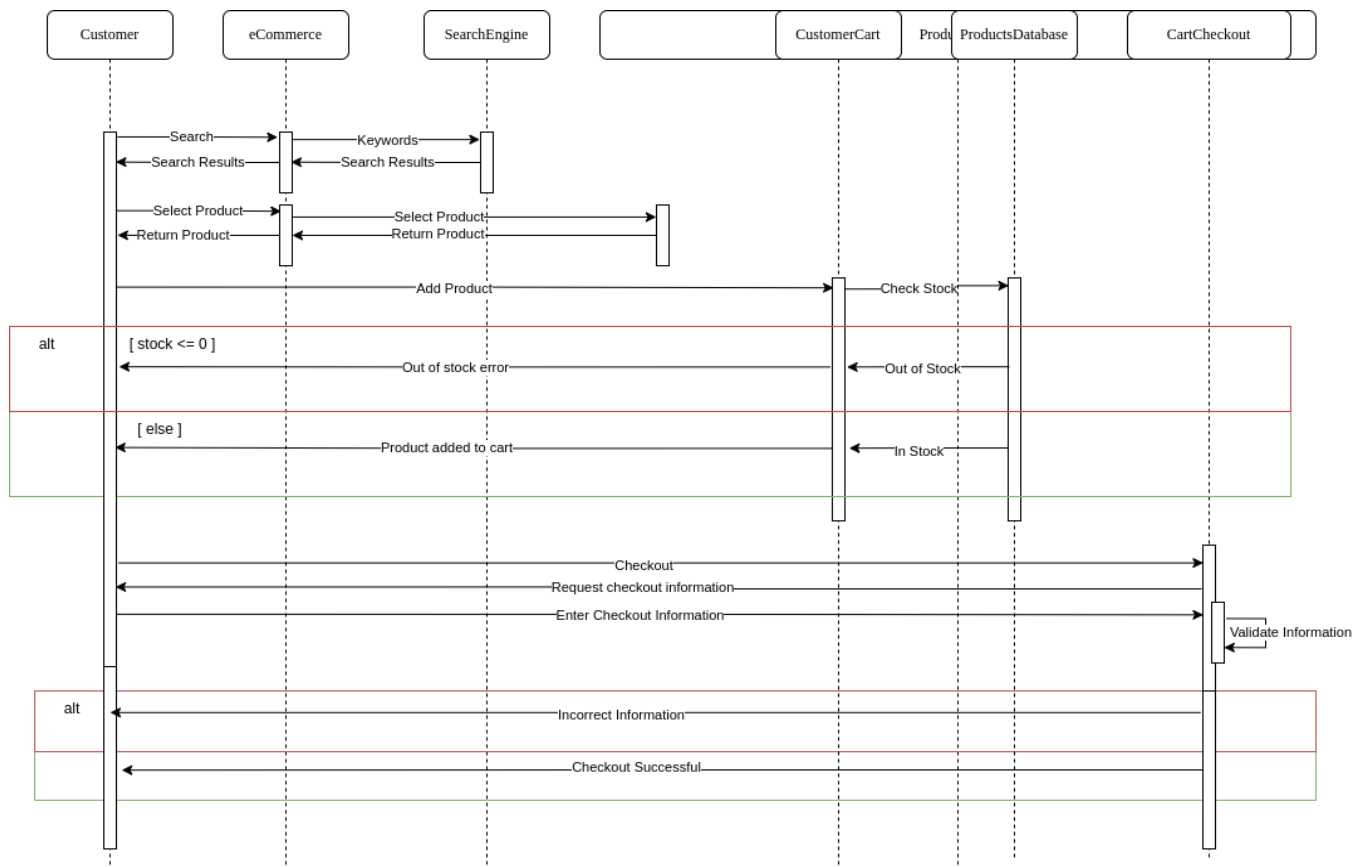


Ecommerce has been booming in Bangladesh, and especially with the pandemic, the demand for it has exponentially increased. A general case ecommerce runs as follows:

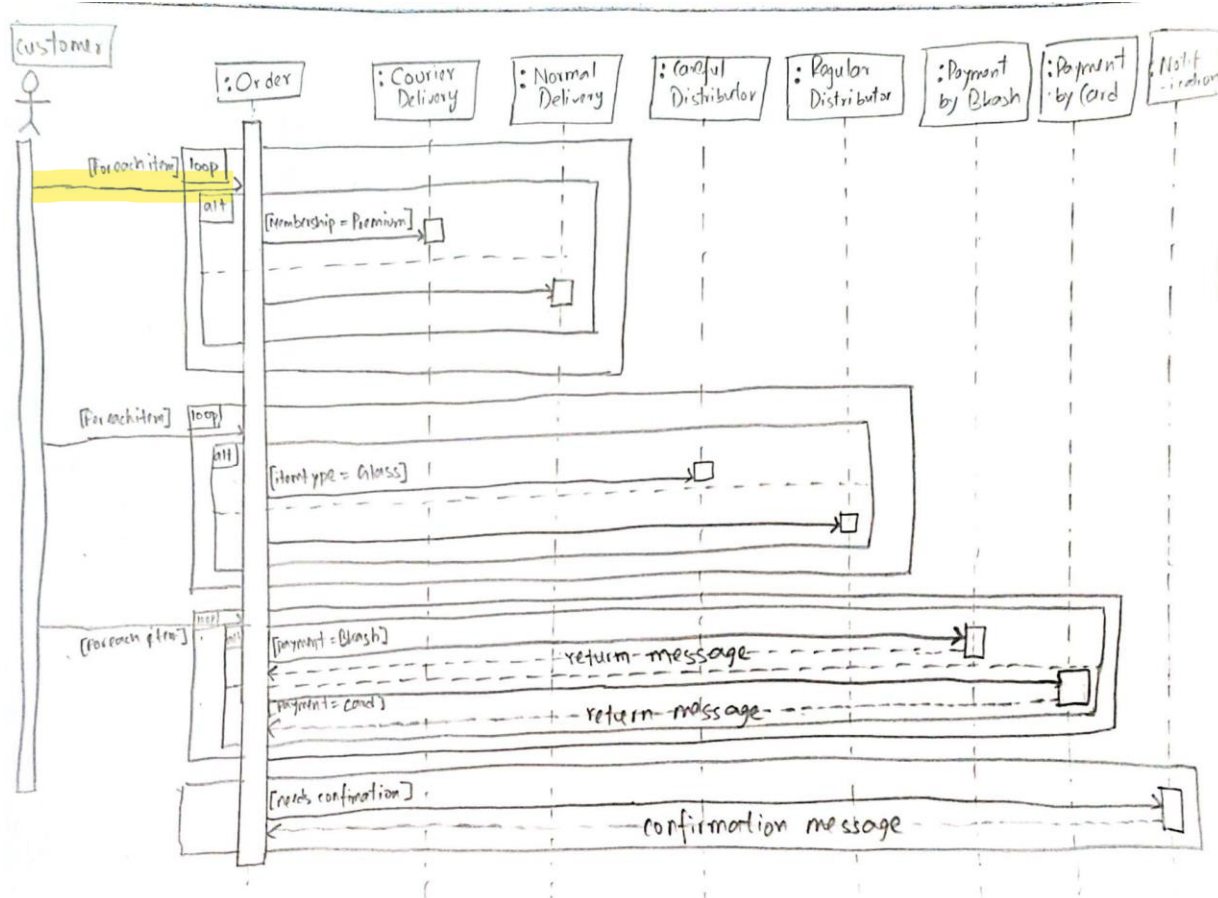
1. After a customer visits the site, they search for a product by typing its name which is passed to the SearchEngine
2. The SearchEngine then fetches the products from the ProductsDatabase and serials them in accordance to the relevance of the searched keywords and returns them to the customer
3. The customer selects an item which takes the user to the ProductPage
4. From the ProductPage, the customer adds the item to their cart which sends a request to the CustomerCart
5. After receiving the request, CustomerCart sends a request to the ProductsDatabase to check if the item is in stock, if the item is in stock, the product gets added to the CustomerCart otherwise an error is shown
6. Finally, the customer selects to checkout which sends a request to the CartCheckout where the customer has to enter their full name, email address, phone number and delivery address
7. If all the information has been entered correctly, a success message is shown, otherwise an error message is shown

Draw the sequence diagram for the above scenario



A customer can place an **order online**. For each item, the order can be sent to the customer either by **courier** or by **regular delivery** depending upon their **membership type**. The customers can be premium users or free users. Only the **premium users will get the courier service**. If the item is made up of **glass**, then it is **dispatched by a careful distributor** instead of **regular**. Both the users can **pay by card or bkash**, where the system sends a confirmation message. Optionally, if the member selected the notification option in the order, the business will send a confirmation note to the user.

Draw the sequence diagram for the above scenario.



Watching a movie or documentary in hoichoi is always exciting. In a simple hoichoi site, after **the user logs** in using the credentials, there is a simple dashboard containing the suggested movie or Tv series along with a search bar at the top to search for any item. **The user can search for the contents in three ways**. They can **search by a content name** like “Mahanagar”, they can **search by the name of an Artist or Director** like “Mostafa Sarwar Faruki,” and finally they can **search by a genre** like “Crime Thriller.” For the first case, **the hoichoi search manager fetches a single entry** along with the **metadata from the hoichoi server** and **displays it to the user** as a tile along with the metadata. For the second case, a list of content involving the Artist or Director is showed (not as tiles) to the users after being fetched from the server. And finally, the relevant contents of a genre search are offered as tiles (without the metadata) for the user to select, however the search manager fetches the metadata from server for later use. All user communication with the search manager is relayed by the web interface of hoichoi. Draw a sequence diagram based on search system of hoichoi as described above.

