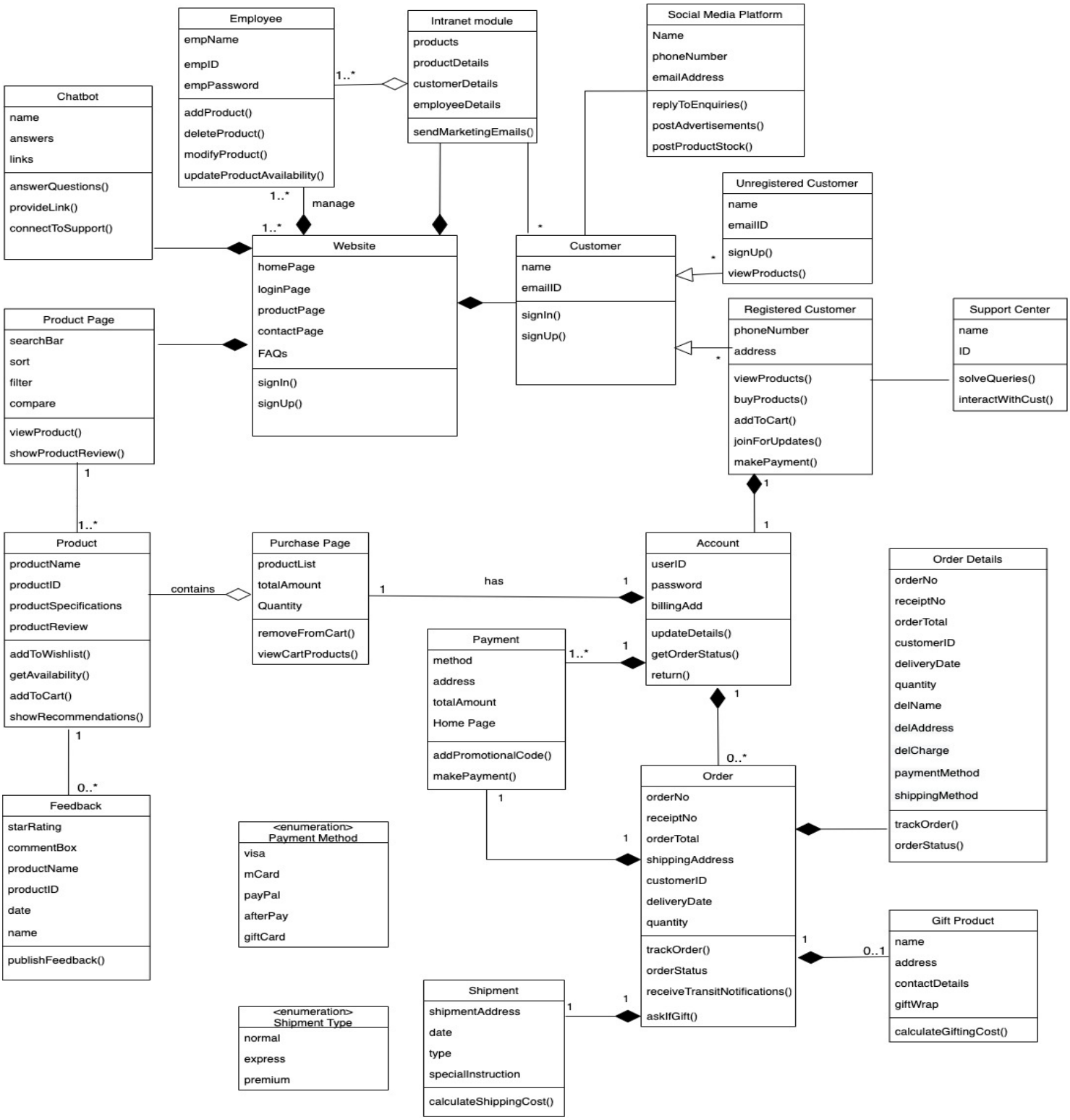
CLASS DIAGRAM FOR USE CASE 1



In the above class diagram, the four most important classes are Employee, Product Page, Feedback and Purchase Page in a way that they focus on the important parts of the process- update product information, customer search, customer purchase and product feedback, respectively.

The 'Employee' class has empName, empID, empPassword as attributes. All the instances in this class can be differentiated from each other using these attributes. empID acts as the unique identifier as no two employees can have the same ID.
Instance – Chris, 207, hope12!
In the above given instance, "Chris" is the employee name, having ID "207" and "hope12!" is his password.
This class is associate with other two classes, namely 'Intranet module' and 'Website'. Employees have access to the website on which they modify(add/edit/delete) the information about the products, add or delete them and update information about product availability. This activity will be important for both, the customers and the employees. The employees also have access to the Intranet module, where they can set automatic sending of marketing emails to customers having information about the new products, discounts, promotional codes and availability.

The 'Product Page' class has attributes – searchBar, sort, filter and compare. This is where all the products and their review can be viewed by the customers. The attributes ease the browsing experience of the customers by providing them with the facility of searching by typing keywords, filtering, sorting as per price or popularity and compare a product with another similar product.
Instance – Laptop, popularity, brand.
This class is associated with 'Product' class where a product page can have one or more products on it. It will enhance the product search of the customers by showing them recommendations based on the viewed product. It will allow the customer to add item to the wishlist or cart and get to know if it is in stock or not. This class has a composite relationship with the 'Website' class, meaning that this class gets affected by the destruction of the website class. Signing in can pop up customized suggestions of products specifically for them as per their search and purchase history.

The 'Feedback' class shows that the customers can give their reviews about the products which is viewable to everyone. It has the attributes – starRating, commentBox, productName, productID, date and name. These attributes would differentiate all the objects from each other.
Instance – 5/5, Excellent product. Worth buying., Mac, NB20, 02/07/2020, Lizzy.
This class is associated with the 'Product' class and their relationship is such that each product can have 0 or more feedbacks. These product reviews are then published on the website to be viewed by everyone.

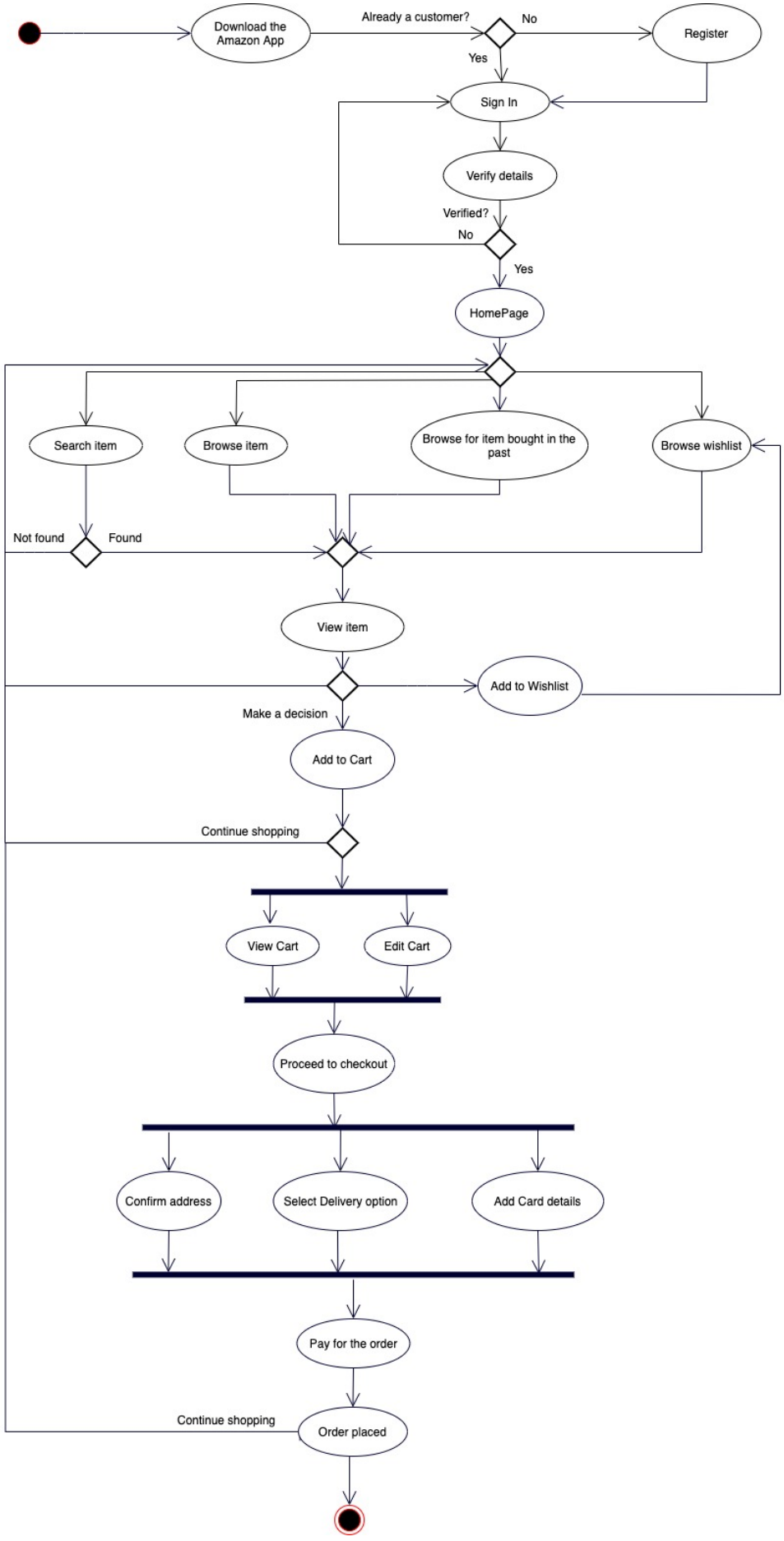
The 'Purchase Page' class is nothing but the Cart page with the attributes productList, totalAmount, Quantity. All the products added to the cart with the intention of buying can be viewed here along with the information about the total number of products and the total sum of them. Products can also be removed from the cart at this stage. It has 1-1 relation with the 'Account' class implying that one account can only have one purchase page. It is associated with the 'Product' class as it contains products which are added to the cart.
Instance – MacBookAir Airpods, $2000, 2

The above class diagram is aimed to meet the stakeholder needs. It rightfully shows the how the user need of better purchase experience is improved by providing them with different payment methods (visa, MCard, PayPal, afterPay, GiftCard) and shipping options (normal, express, premium). They can also track the shipped product, save viewed products, read product reviews, provide feedback, add promotional codes, calculate shipping cost. They can also choose to deliver gifts and can know the extra cost for it as well. Their main concern of returning products is also addressed. The users will also be able to interact with people (Support). They will receive email periodically with information about promocodes, new products or any upcoming products, along with product stock information. Employees will be able to edit product information and availabilities and add/delete/modify them. The customer searching experience is also met with the features of searching by keyword, sorting, filtering and comparing products. In all, this plan improves the overall

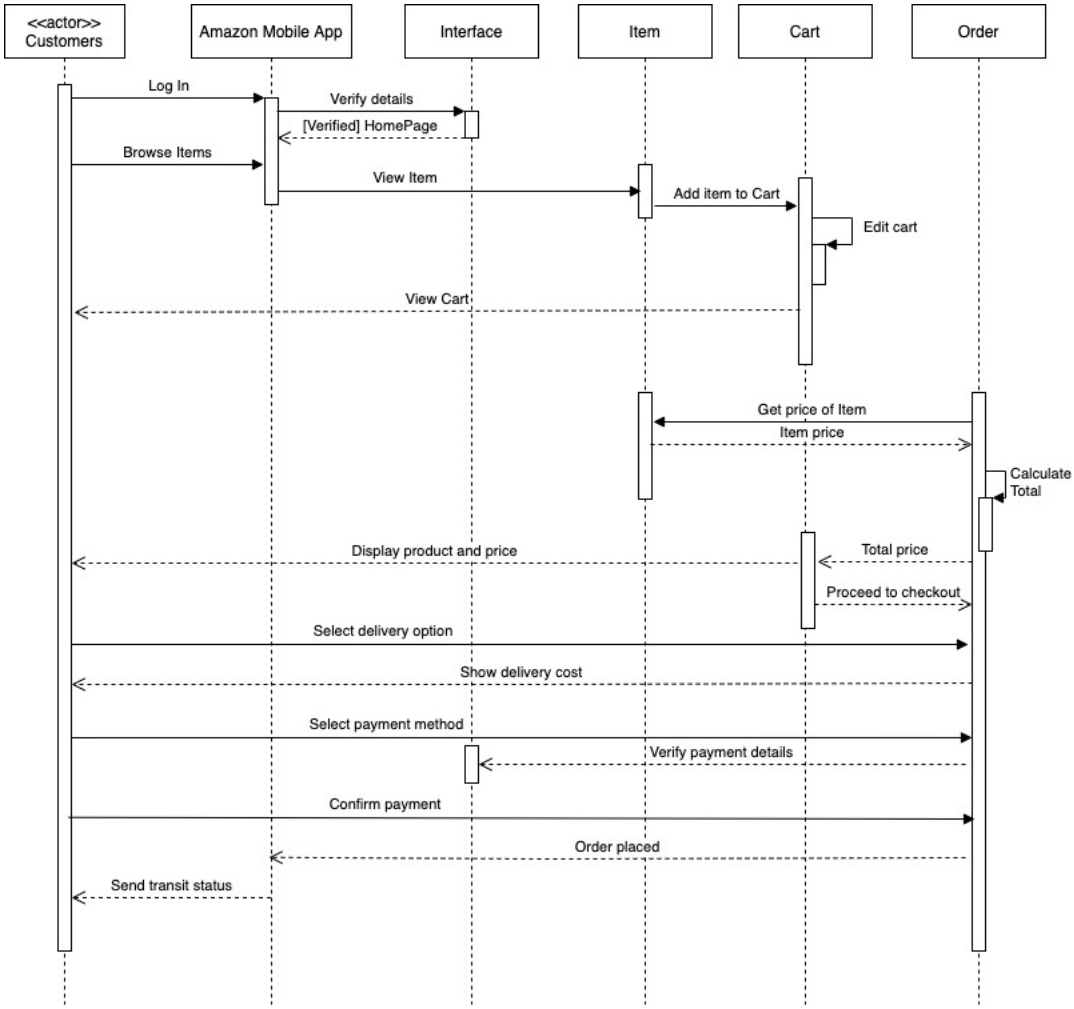
customer experience on the website which includes their product searching experience (advanced browsing features), purchasing (different payment and shipment options, recommendations to name a few) and post-purchasing experience (track order and return facility).

ACTIVITY DIAGRAM FOR CASE 2

The activity diagram is for Amazon Mobile App which shows online shopping on a Mobile App. The purpose of it is to show the interaction between the user and the system. Each user downloads the application and registers if he hasn't done so. When a user tries to log in into his account, he will be asked for his password for verification. If there are any wrong credentials, he will be taken back to the log in page to edit and try logging in again. On successful login, HomePage will be the default page. Further, the user browses according to his convenience – by either searching products by keyword or browsing the product page or by viewing the items bought in the past or going to the wishlist. On viewing an item, it is either added to the cart or the wishlist or the user goes back to browsing again. The user when view his cart, edit it, add more items. He further proceeds to checkout. On completing the confirming of address, delivery option and card details, the user pays for the order. The order is placed, and then the user can either continue using the app or exit it.


Download the Amazon App
Already a customer?
No
Register
Yes
Sign In
Verify details
Verified?
No
Yes
HomePage
Search item
Browse item
Browse for item bought in the past
Browse wishlist
Not found
Found
View item
Add to Wishlist
Make a decision
Add to Cart
Continue shopping
View Cart
Edit Cart
Proceed to checkout
Confirm address
Select Delivery option
Add Card details
Pay for the order
Continue shopping
Order placed

SEQUENCE DIAGRAM FOR CASE 2



The above sequence diagram is for the Amazon Mobile App which shows the series of messages between different objects/actors in the system. This internal view depicts the behaviour of the system when an action takes place. When a user logs in, the app sends details to the interface (database) to verify them. On successful verification, HomePage is viewed by the user. The user then browses for the products, views them, adds them to the cart. He then edits the cart, and views it. To prepare the final order, price of each item is taken by calling for item price and returning it back to the order lifeline. The total amount is then calculated. The user, on making a decision about the products in the cart, proceeds to checkout after viewing the total amount, total products and product list. He is further asked to choose his delivery option. Delivery cost is calculated and sent back to the customer for his reference. The user then selects the payment method, enters payment details which are then verified by the system. The user then pays for the order, and the order is placed. The system then processes the order for shipment and keeps the user updated by notifying him about the transit status.