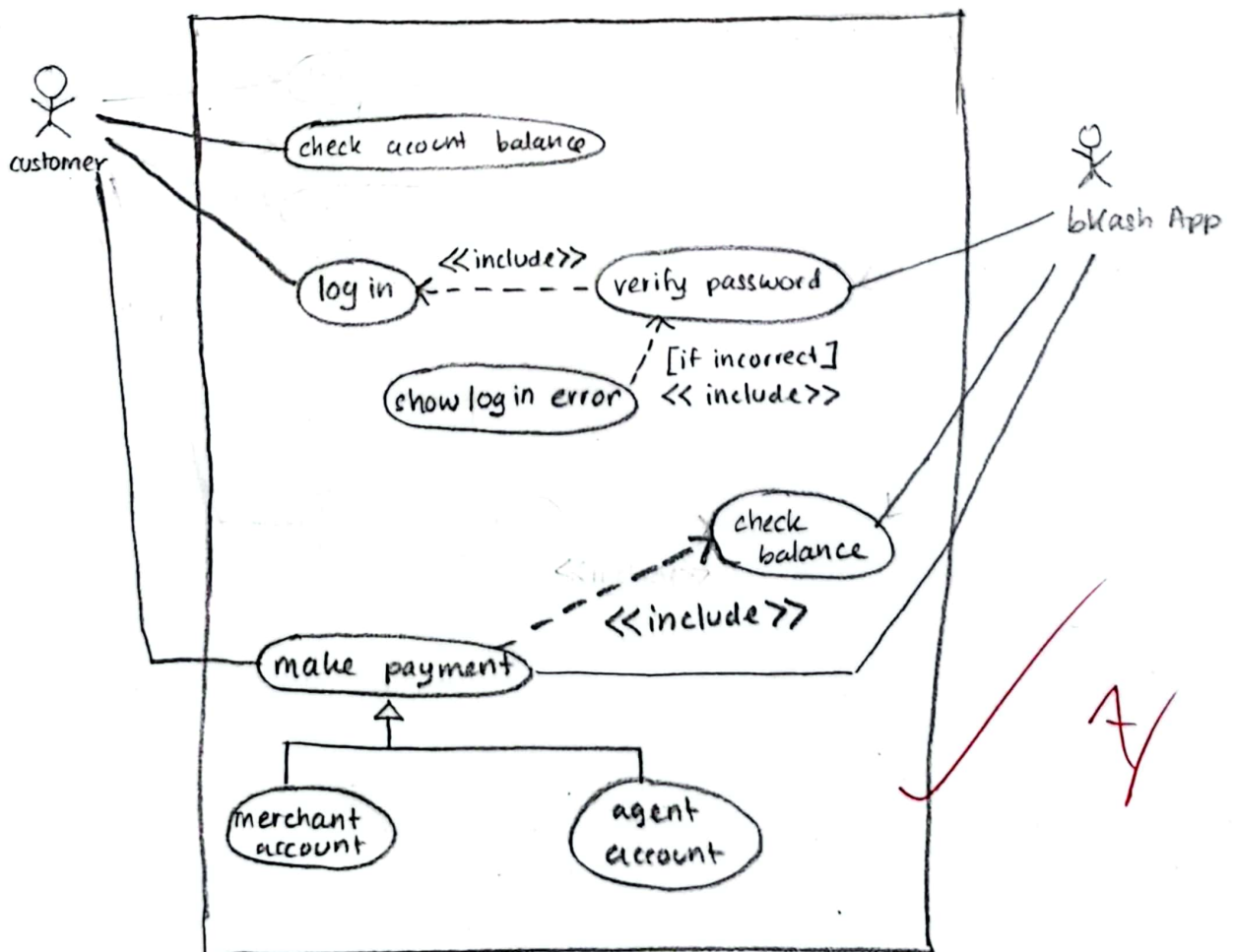


1. The question is based on the following case study. You have to **design** a use-case diagram. Your mark is distributed according to your analysis capability and depth of understanding for different actors and use cases along with their relationships. [CO2] [7]

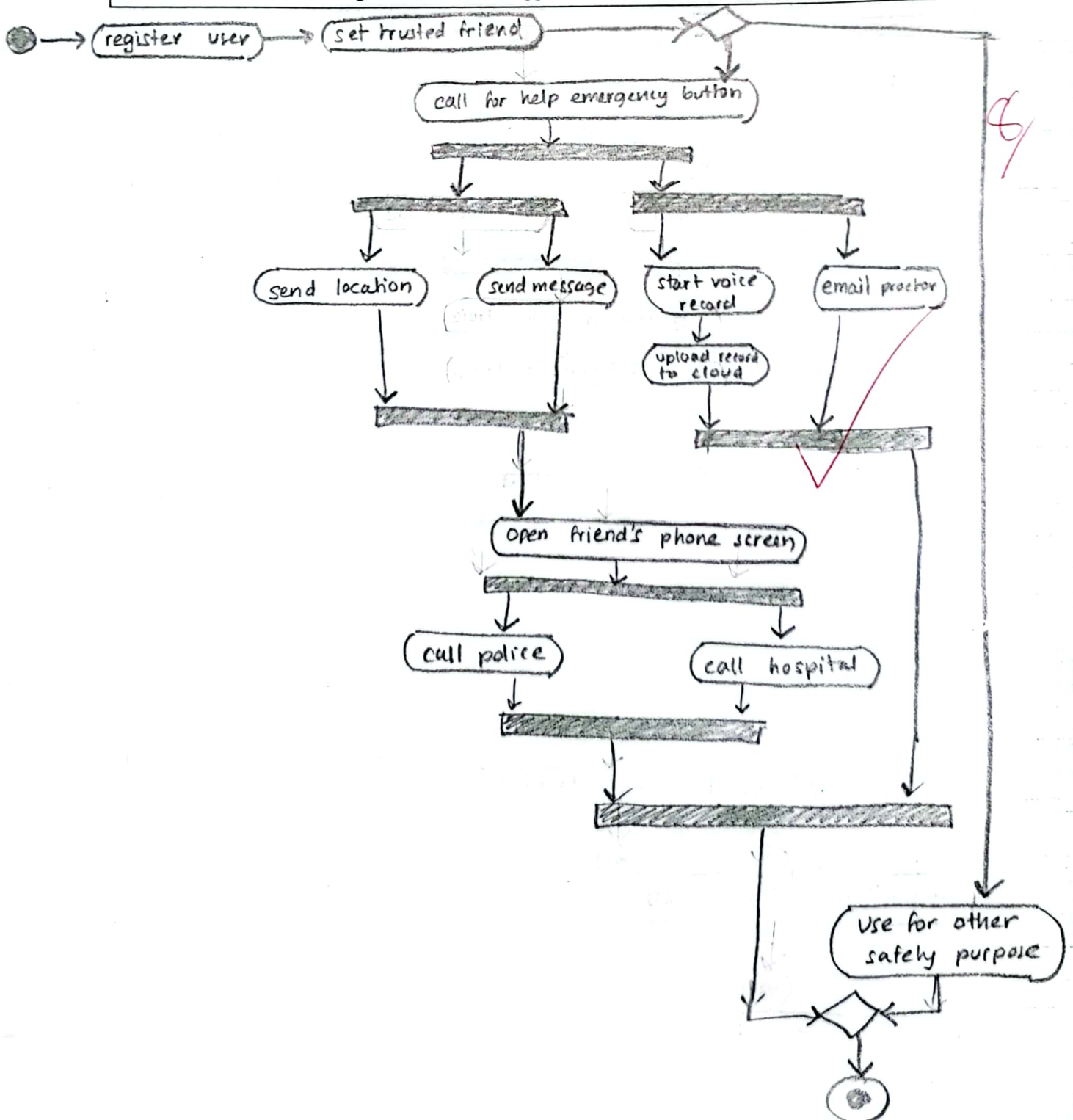
The customer is using bKash App for the bill payment system. This bKash App allows the customer to **log in** to the system, **check the account balance**, and **make payments** towards bills. When a customer types his/her login information the bKash App is going to **verify the password** before completing the login process. If the login information is incorrect then the app is displaying the **login error**. When the customer wants to transfer funds to make a payment for the bill this app is going to make sure there is **enough money** to complete the transaction. When a customer wants to make a payment, the app is going to give them the option whether it is a **merchant** or **agent account**.



2. Design an Activity diagram based on the following scenario. [CO2]

[8]

We all are concerned about an event that caused Abrar's death on his campus. To prevent such kind of heinous act you decided to build an app that can help people in these situations. The app will have an emergency button that will immediately call for help to your nearest trusted friends by sending them your location and a message. It will also start voice recording that will be uploaded to the cloud so that it can work as evidence later on. Additionally, it will send an email to proctor. If your friend uses this app your message will open a screen on their phone where they can call for police and hospital with just one press of a button. This app can be used for other campus safety-related issue as well. The user needs to register once into the app and set his trusted friends from his contact list.



Care is a Dental Practice Management system. Several Dental Providers take services from **Care**. Now, you have to draw a **Use Case Diagram** based on the following scenario.

Providers can log in to the system but the registration has to be done by the Admin. After login, Providers can switch between chambers if there are multiple chambers of a provider. There is this external system named **Smile** from where the system gets all the patient information. From that information, providers can view 3 values, those are the number of newly added patients, due tasks, and daily revenue. For each task, the provider can mark it as Confirm or Pending. The provider can get information about patient appointment requests from the external system. And thus confirm or cancel the appointment. A provider can also book appointments for the patient directly from the system in a scheduler. But for this provider has to check the scheduler for an empty slot. Lastly, the provider can send Follow up notifications to the patients.

Solution:

