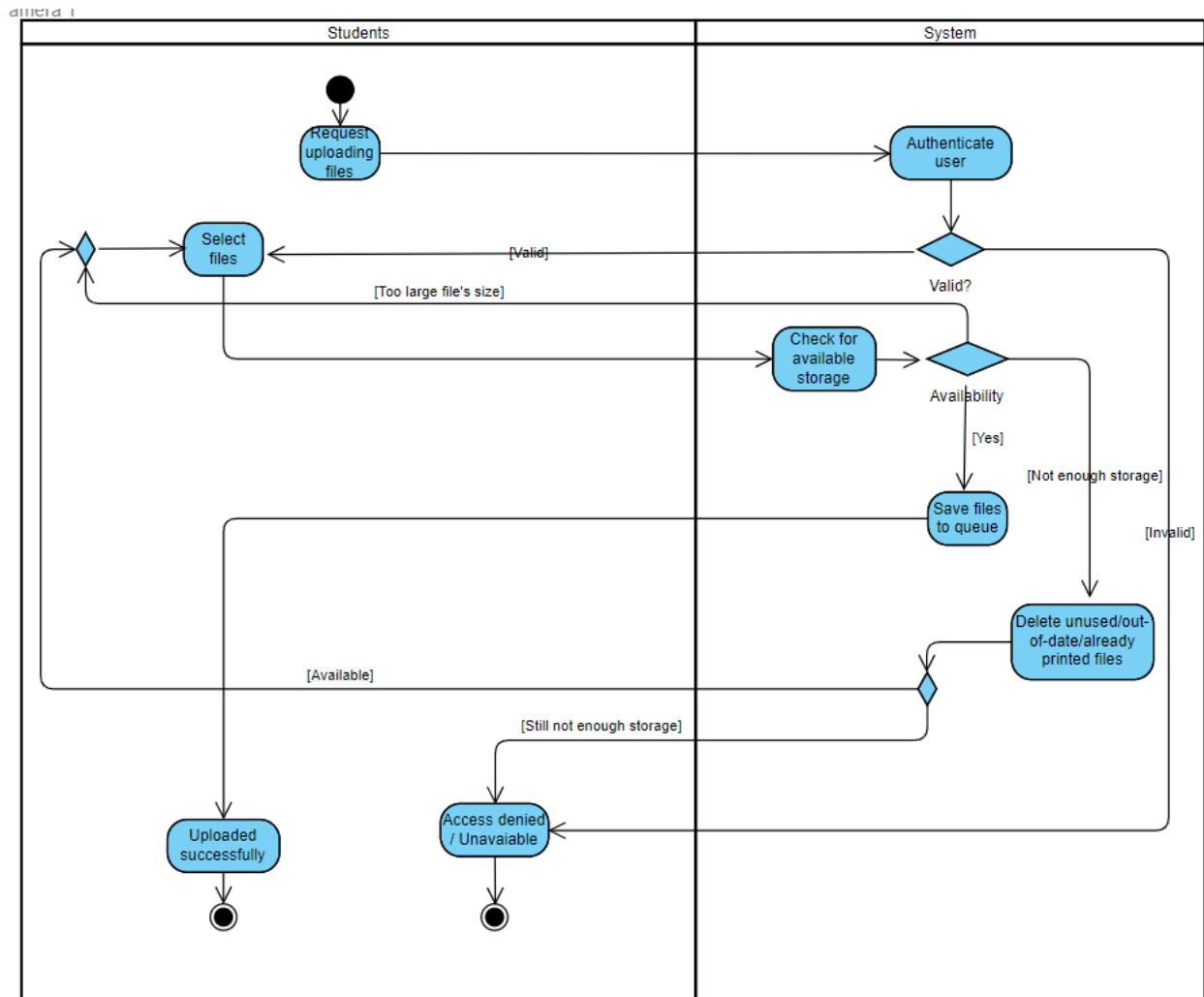


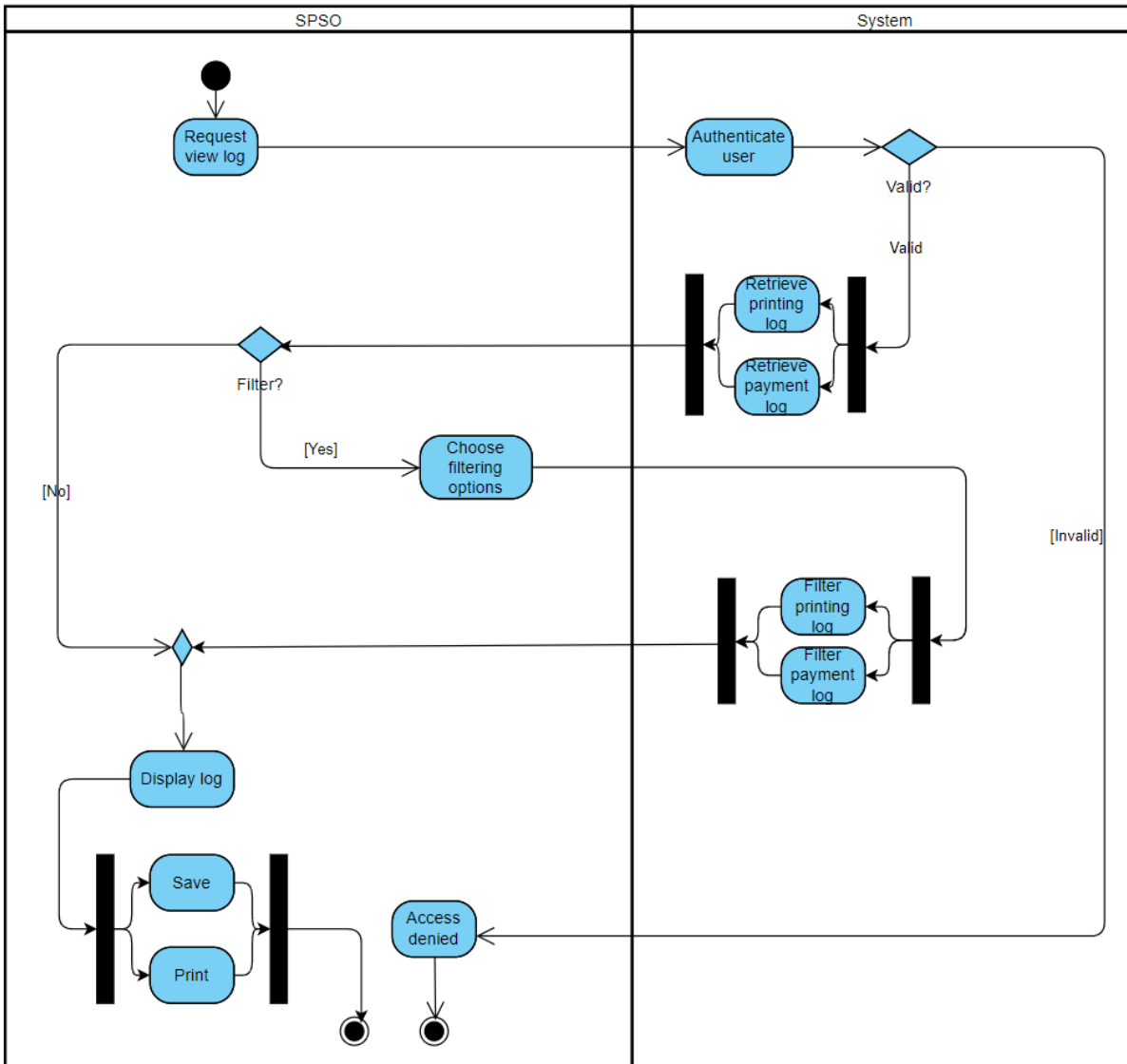
Description:

The above diagram is Login Activity Diagram. Students actor initially request login, then there's a decision branch. If the Students actor has already had an account, then the actor will enter email and password which then lead to validation step; if the account is valid, the actor has login successfully and menu will be displayed, otherwise, the actor is asked to re-enter email and password. If the actor has not had an account yet, user is directed to register page and is asked to fill email and password in registration form. The information is then saved, the actor will login successfully and the menu will be displayed. If the actor has forgotten the password, the actor is asked to enter already registered email so the system can send password-reset verification email. After entering new password and validation, user will login successfully and menu will be displayed.



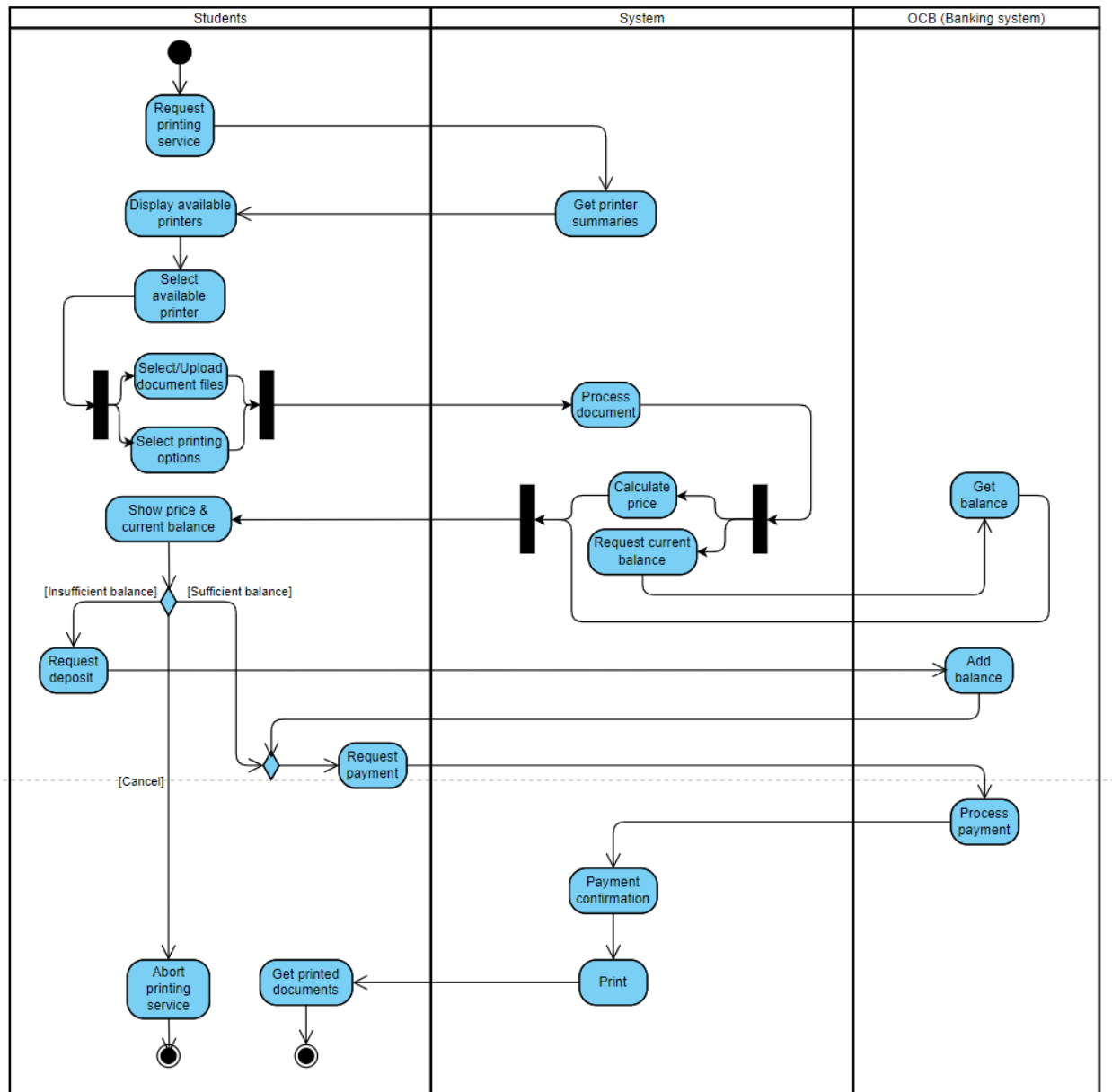
Description:

The above diagram is Upload printing files Activity Diagram. Diagram. The Students actor will first request uploading service and system will verify user. If it's an invalid user, access is denied. Otherwise, the actor will be granted access, after that, user can select files to upload and the system database will check if there's available storage for the files. If available, files will be uploaded and saved to queue, success notification is displayed. If unavailable, the database will try to delete unused/old/already printed files. After that, if there's still not enough storage, unavailable storage notification is displayed, otherwise, files will be uploaded and saved to queue, success notification is displayed.



Description:

The above diagram is View log Activity Diagram. The SPSO actor will request retrieving log and system will verify user. If it's an invalid user, access is denied. Otherwise, the actor will be granted access, after that, system will retrieve from database both printing log and payment log concurrently. After that, if SPSO actor wants to filter out the logs, they can enter desired filtering options, then system will filter out both printing log and request log concurrently based on given options. Next, the default log is overridden with the filtered log and log will be displayed to user. Finally, log will be both printed and saved in parallel.



Description:

The above diagram is Print documents Activity Diagram. The Students actor will request printing service, then after receiving request, system will send to user a list of currently available printers. The actor will select available printers. Then Students actor can upload or select already uploaded document files and choose printing options. Selected files will be either searched in already uploaded queue or uploaded if the files are new. Then files will be downloaded to printing system and printing options will be forwarded as well. After printing system has received files and printing options, system will process and format documents based on given options. Next, concurrently, price is calculated and current user's balance is requested from OCB actor to display to user. If Students actor chooses to cancel printing service (including the case that if the balance is insufficient and user does not want to deposit money), service is aborted. If balance is insufficient, user will deposit an amount of money to account's balance, then wait

for OCB to add money to balance and send confirmation. After that, for both sufficient and insufficient balance cases, user will request payment, wait for OCB to process payment and send confirmation to the system. After receiving payment confirmation, the system will start printing documents. Finally, users will get their printed documents at the locations of previously chosen printers.