**DOCUMENTATION FOR THE POS SCRIPT**

# 1. BASIC INTRODUCTION

The Class “Backend” controls the communication from the QML files, which load the Graphical User Interface, to the Python script. It makes use of “Slot and Signal” classes that are provided by the “QtCore” module.

The class “Signal” sends information from Python to QML and the class “Slot” receives information from QML—enabling communication between scripts.

The list “report” keeps record of the transactions that occurred in the running session. The dictionaries “supersheet”, “adminsheet”, and customersheet” contains the login information of the super admin, admin, and student respectively.

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# 3. SCRIPT FUNCTIONS

## 3.1. Test\_gspread

Retrieves Googlesheet from cloud and loads information into physical memory

## 3.2. Pdtolist

After removing a (super) admin or after a transaction, the function converts the dataframe to a list for writing to csv file

## 3.3. Loaded

Called to close Loading page after a process has completed

## 3.4. Writeout

Executed activity is written to external log file. ‘Log’ Function calls ‘Writeout’

## 3.5. Log

Called after an activity has been executed successfully or failingly

## 3.6. Closeapp

Runs when close button is clicked. It prints the activity log for that current session and closes the application

# 4. SIGNALS

The signal is sent with the “emit” method and the information to be sent is argument of the method.

## 4.1. Incorrect

For login and transfer activities. Emitted during logins if registration number or password is wrong. Check 'Invalid Signal' in No. 2

## 4.2. Invalid

For register and remove admins activities. Emitted during registration if registration number already exists. Emitted during removal if registration number, to be removed, doesn’t exist. Check 'Incorrect Signal' in No. 1

## 4.3. Finishedprocess

Used when changing page to close the loading page and open the next page

## 4.4. Loggeduser

Emitted when user changes to a different feature page (except registration). Transfers user details across feature modes

## 4.5. Accbalance

Communicates user's account balance when mode changes and displays it. Emitted with 'Loggeduser Signal' in No. 4

## 4.6. Featuremode

Displays the current activity window. Emitted with 'Loggeduser Signal' in No. 4

## 4.7. Proceed

Gives go ahead to continue transaction

## 4.8. Totalexp

Used in purchase page to sum up total expense

## 4.9. Accountname

Used in feature pages to identify customer and/or beneficiaries of transfers

# 5. SLOTS

Slots are called from QML files. They call the python function that they wish to execute with the slot decorator. The argument is the datatype of the information transmitted

## 5.1. Superuser

Runs during a Super Admin log in. It passes the information entered and, at the end, emits appropriate Signal(s) based on the outcome of the login attempt

## 5.2. Superadminlogout

Called when a Super Admin is logged out.

## 5.3. Adminuser

Runs during an Admin log in. See Description of 'Superuser Slot' in No. 2 for extra detail

## 5.4. Adminlogout

Called when an Admin is logged out.

## 5.5. Checksuper

Used when Removing/Registering to certify they exist/don't exist respectively

## 5.6. Registersuper

Called when Registering a Super Admin or Admin

## 5.7. Removesuper

Called when Removing a Super Admin or Admin

## 5.8. Studentuser

Runs during a User/Student log in. See Description of 'Superuser Slot' in No. 2 for extra detail

## 5.9. Userlogout

Called when a User/Student is logged out.

## 5.10. Feature

Called to assign the variable which tells the program what activity was chosen. Helps to Display and Load the correct page

## 5.11. Menubranch

Tells the code what page the menu branched out from

## 5.12. Switchfeature

Called to emit Signals which display Activity window, Logged user's name, and Account balance. See 'Loggeduser Signal' in No. 4 of Signal List

## 5.13. Purchaseamounts

Used to sum the multiple purchase values. Calls totalexp Signal

## 5.14. Purchasefeature

Called to assign the variable which tells the program what amount was spent

## 5.15. Transferrecipient

Checks if the beneficiary of a transaction exists

## 5.16. Transferfeature

Called to assign the variables which tell the program what amount was transferred, the Recipient, and Recipient's means of identification

## 5.17. Deposit

Called when making a deposit to confirm admin to verify the deposit and update the database

## 5.18. Checkuser

Called when registering a new user to be sure reg no doesn't already exist

## 5.19. Registeruser

Called to assign the variables which tell the program Reg No., Password, and Fingerprint of New User

## 5.20. Transactiondone

Called after a Purchase or Transfer was attempted regardless if it was successful or not