INDIVIDUAL ASSIGNMENT

TECHNOLOGY PARK MALAYSIA

CT108-3-1-PYP

PYTHON PROGRAMMING

APU1F2011-MMT/SE/CGD/CE/IT/CS/CS(DF)/CS(IS)/CS(CYB)

APD1F2011-MMT/SE/CGD/CE/IT/CS/CS(DF)/CS(IS)/CS(CYB)

HAND OUT DATE: 25th December 2020

HAND IN DATE: 26th March 2021

WEIGHTAGE: 100%

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TP NO: TP058513

INSTRUCTIONS TO CANDIDATES:

1. Submit your assignment online in MS Teams unless advised otherwise
2. Late submission will be awarded zero (0) unless Extenuating Circumstances (EC) are upheld
3. Cases of plagiarism will be penalized
4. You must obtain at least 50% in each component to pass this module

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Introduction

The program is made is about a bank loan management system. The bank has three users admin, new customer and register customers. Basically, the bank provides different kind of loans which include education loan, car loan, personal loan and home loan etc. The admin menu has great features like transactions of specific customer/loan type and view all transactions etc. The new customer has loan calculator which allows to calculate the different kind of loans. In Registered customer there is option to pay to loan installments.

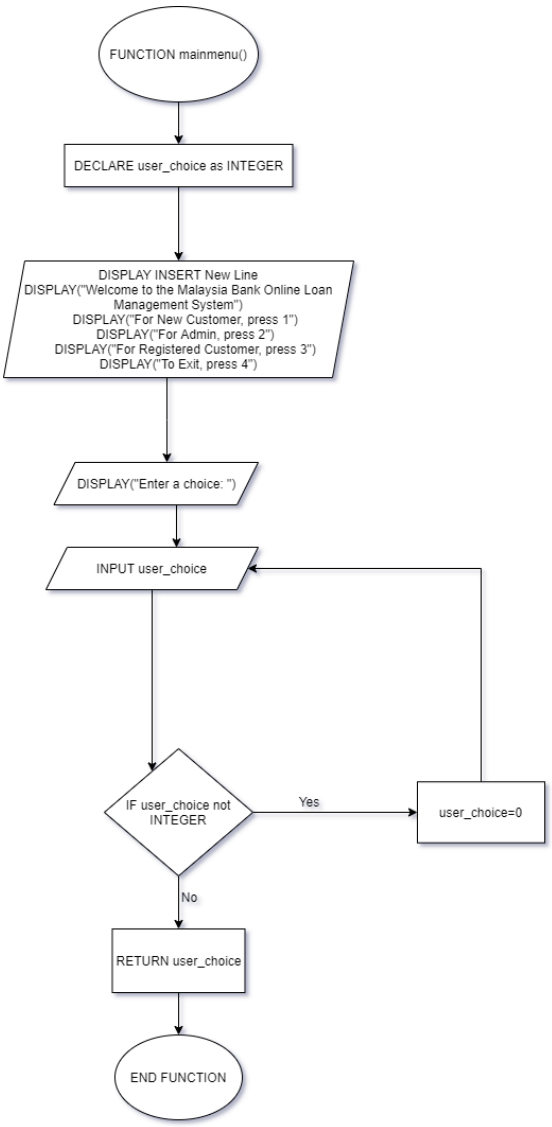
Assumptions

- I assume that people who are eligible will only apply for bank loan.
- I assume that people applying for registration of bank loan will enter correct personal details.
- I assume that people will pay loan before time.
- I assume that people will easily pay the bank loan installment without any issues
- I assume bank is providing fix interest rate for personal loan.
- Admin can reject or approve any kind of registration application.
- Registered Customer can easily see the transaction or loan status.

Design of the Program

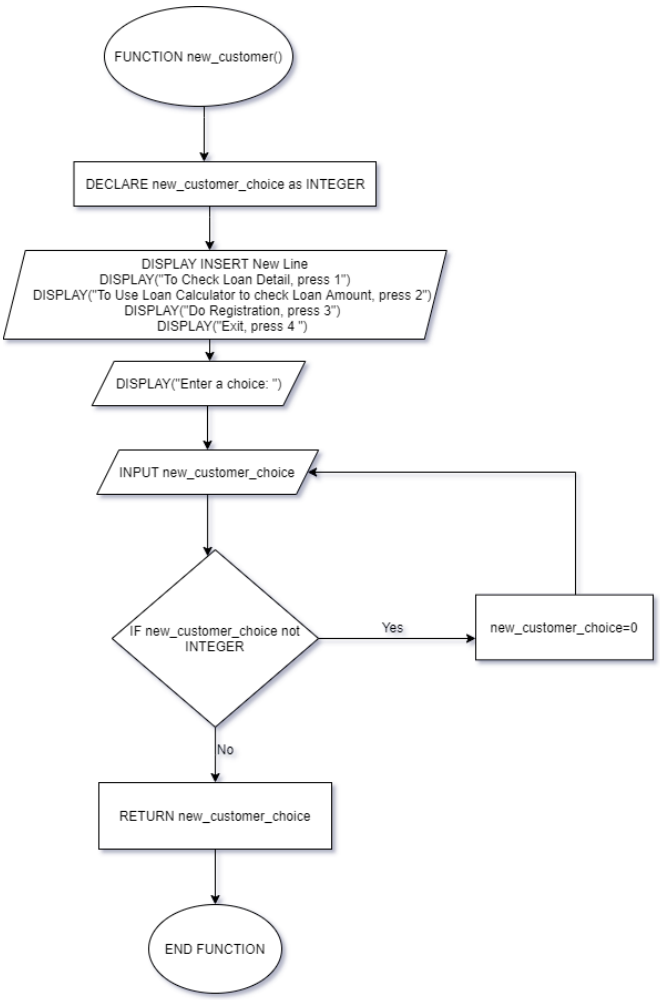
Function mainmenu

```
DEFINE FUNCTION mainmenu():
    DECLARE user_choice as INTEGER
    DISPLAY INSERT New Line
    DISPLAY("Welcome to the Malaysia Bank Online Loan Management System")
    DISPLAY("For New Customer, press 1")
    DISPLAY("For Admin, press 2")
    DISPLAY("For Registered Customer, press 3")
    DISPLAY("To Exit, press 4")
    DISPLAY("Enter a choice: ")
    INPUT user_choice
    IF user_choice not INTEGER
        user_choice=0
    ENDIF
    RETURN user_choice
END FUNCTION
```



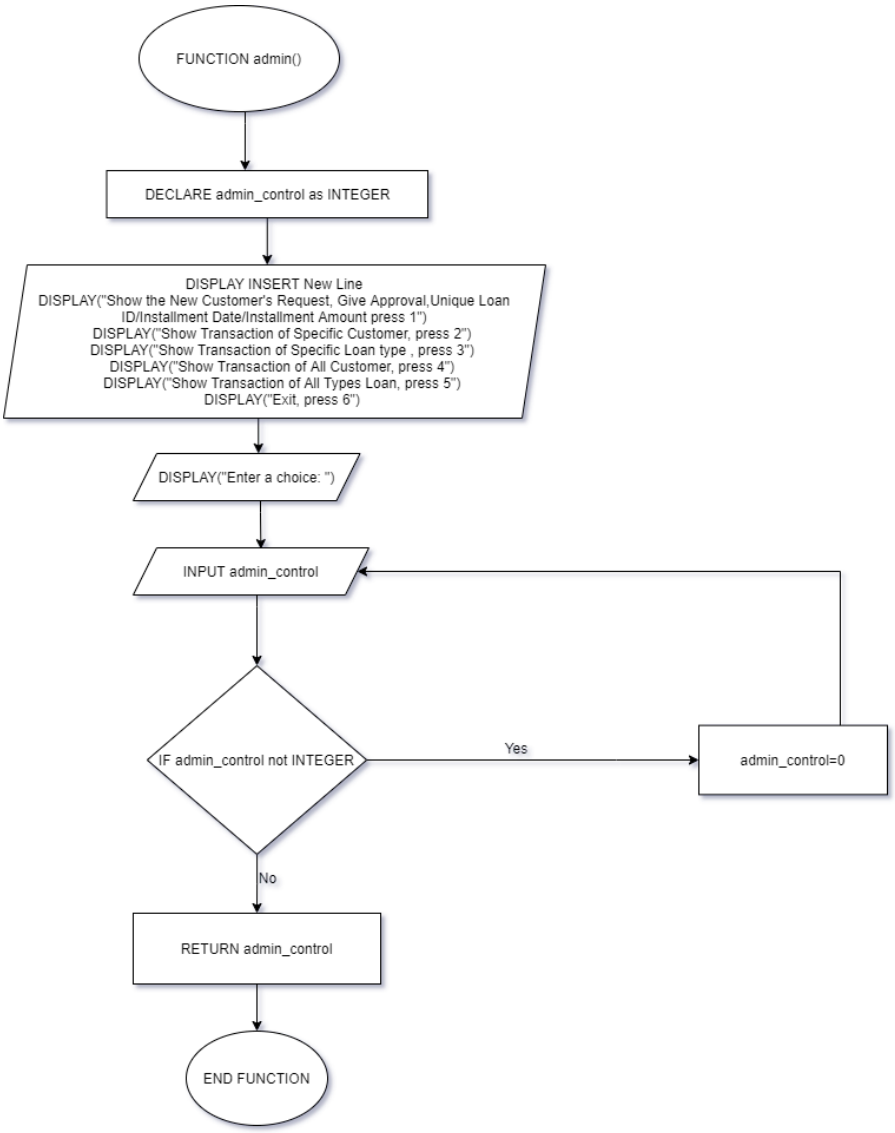
Function new_customer

```
DEFINE FUNCTION new_customer():
    DECLARE new_customer_choice as INTEGER
    DISPLAY INSERT New Line
    DISPLAY("To Check Loan Detail, press 1")
    DISPLAY("To Use Loan Calculator to check Loan Amount, press 2")
    DISPLAY("Do Registration, press 3")
    DISPLAY("Exit, press 4 ")
    DISPLAY("Enter a choice: ")
    INPUT new_customer_choice
    IF new_customer_choice not INTEGER
        new_customer_choice=0
    ENDIF
    RETURN new_customer_choice
END FUNCTION
```



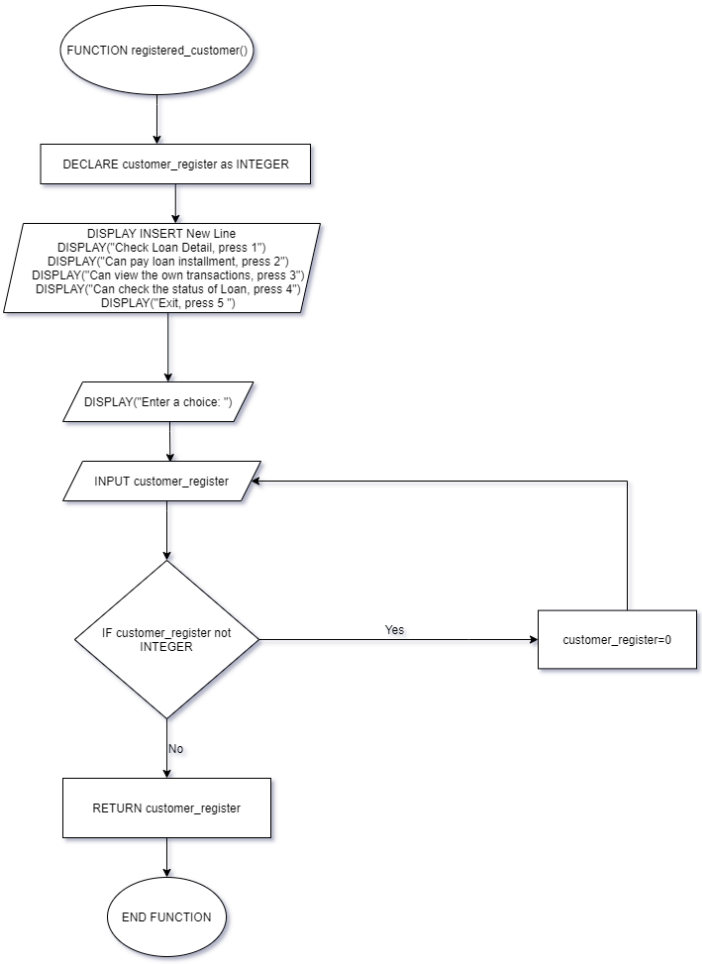
Function admin

```
DEFINE FUNCTION admin():
    DECLARE admin_control as INTEGER
    DISPLAY INSERT New Line
    DISPLAY("Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1")
    DISPLAY("Show Transaction of Specific Customer, press 2")
    DISPLAY("Show Transaction of Specific Loan type , press 3")
    DISPLAY("Show Transaction of All Customer, press 4")
    DISPLAY("Show Transaction of All Types Loan, press 5")
    DISPLAY("Exit, press 6")
    DISPLAY("Enter a choice: ")
    INPUT admin_control
    IF admin_control not INTEGER
        admin_control=0
    ENDIF
    RETURN admin_control
END FUNCTION
```



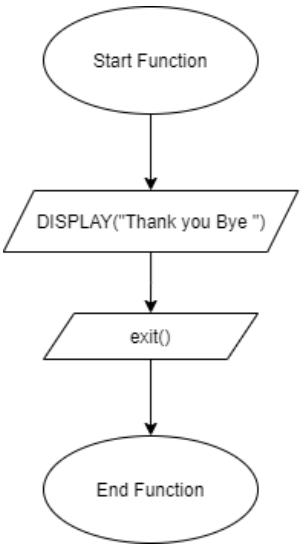
Function registered_customer

```
DEFINE FUNCTION registered_customer():
    DECLARE customer_register as INTEGER
    DISPLAY INSERT New Line
    DISPLAY("Check Loan Detail, press 1")
    DISPLAY("Can pay loan installment, press 2")
    DISPLAY("Can view the own transactions, press 3")
    DISPLAY("Can check the status of Loan, press 4")
    DISPLAY("Exit, press 5 ")
    DISPLAY("Enter a choice: ")
    INPUT customer_register
    IF customer_register not INTEGER
        customer_register=0
    ENDIF
    RETURN customer_register
END FUNCTION
```



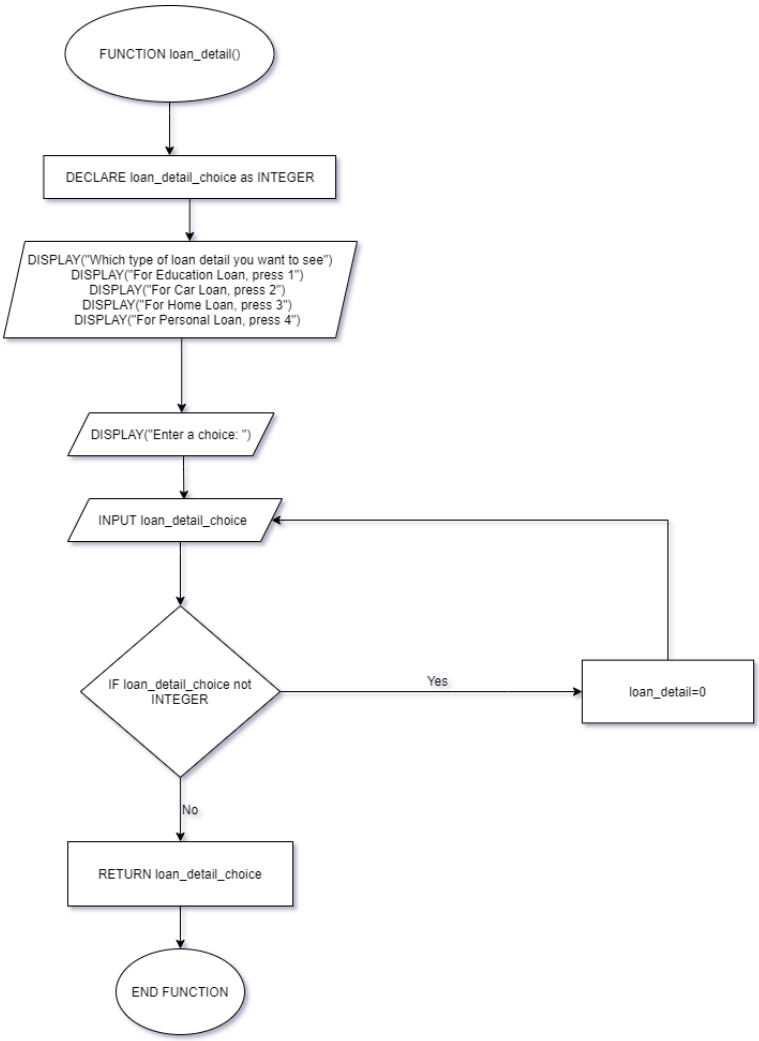
Function exitprogram

```
DEFINE FUNCTION exitprogram():
    DISPLAY("Thank you Bye ")
    exit()
End Function
```



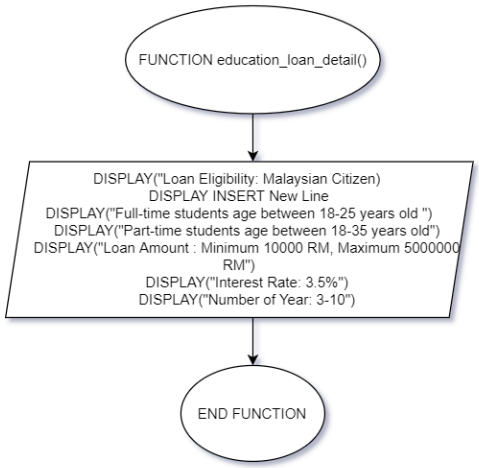
Function loan_detail

```
DEFINE FUNCTION loan_detail():
    DECLARE loan_detail_choice as INTEGER
    DISPLAY INSERT New Line
    DISPLAY("Which type of loan detail you want to see")
    DISPLAY("For Education Loan, press 1")
    DISPLAY("For Car Loan, press 2")
    DISPLAY("For Home Loan, press 3")
    DISPLAY("For Personal Loan, press 4")
    DISPLAY("Enter a choice: ")
    INPUT loan_detail_choice
    IF loan_detail_choice not INTEGER
        loan_detail=0
    ENDIF
    RETURN loan_detail_choice
END FUNCTION
```



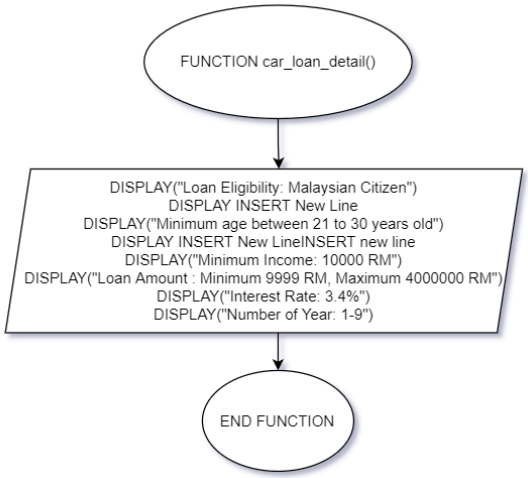
Function education_loan_detail

```
DEFINE FUNCTION education_loan_detail():
    DISPLAY("Loan Eligibility: Malaysian Citizen)
    DISPLAY INSERT New Line
    DISPLAY("Full-time students age between 18-25 years old ")
    DISPLAY("Part-time students age between 18-35 years old")
    DISPLAY("Loan Amount : Minimum 10000 RM, Maximum 5000000 RM")
    DISPLAY("Interest Rate: 3.5%")
    DISPLAY("Number of Year: 3-10")
END FUNCTION
```



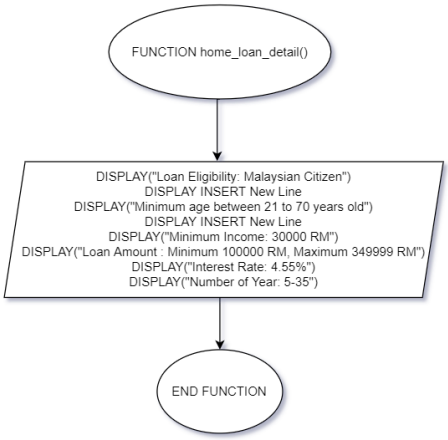
Function car_loan_detail

```
DEFINE FUNCTION car_loan_detail():
    DISPLAY("Loan Eligibility: Malaysian Citizen")
    DISPLAY INSERT New Line
    DISPLAY("Minimum age between 21 to 30 years old")
    DISPLAY INSERT New LineINSERT new line
    DISPLAY("Minimum Income: 10000 RM")
    DISPLAY("Loan Amount : Minimum 9999 RM, Maximum 4000000 RM")
    DISPLAY("Interest Rate: 3.4%")
    DISPLAY("Number of Year: 1-9")
END FUNCTION
```



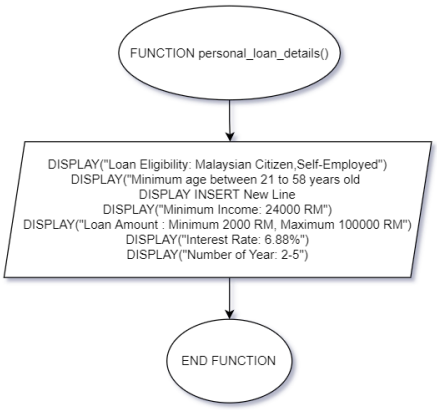
Function home_loan_detail

```
DEFINE FUNCTION home_loan_detail():
    DISPLAY("Loan Eligibility: Malaysian Citizen")
    DISPLAY INSERT New Line
    DISPLAY("Minimum age between 21 to 70 years old")
    DISPLAY INSERT New Line
    DISPLAY("Minimum Income: 30000 RM")
    DISPLAY("Loan Amount : Minimum 100000 RM, Maximum 349999 RM")
    DISPLAY("Interest Rate: 4.55%")
    DISPLAY("Number of Year: 5-35")
END FUNCTION
```



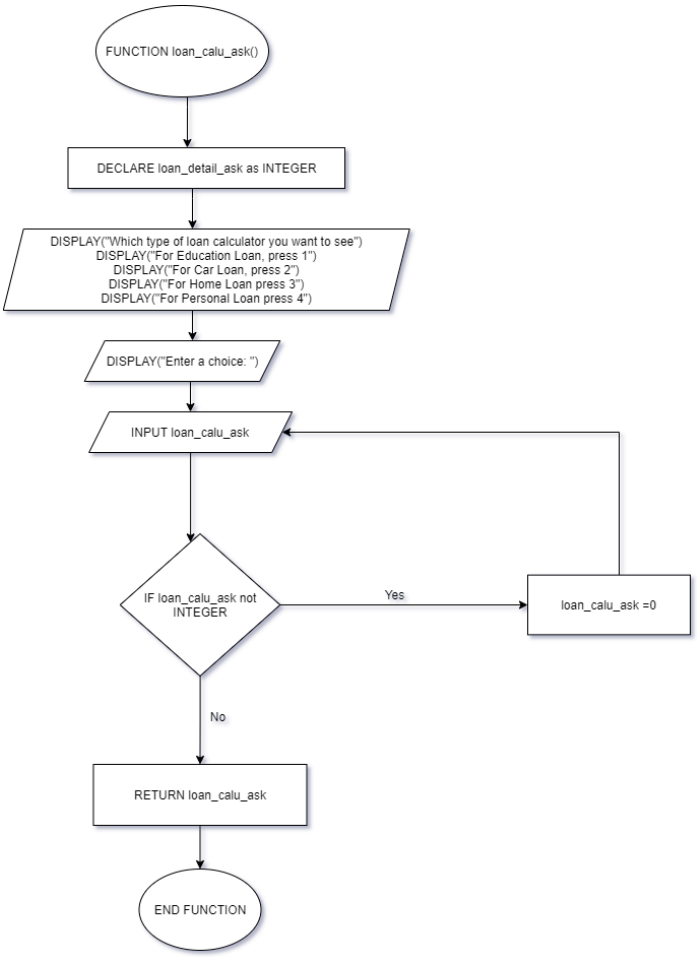
Function personal_loan_details

```
DEFINE FUNCTION personal_loan_details():
    DISPLAY("Loan Eligibility: Malaysian Citizen,Self-Employed")
    DISPLAY("Minimum age between 21 to 58 years old
    DISPLAY INSERT New Line
    DISPLAY("Minimum Income: 24000 RM")
    DISPLAY("Loan Amount : Minimum 2000 RM, Maximum 100000 RM")
    DISPLAY("Interest Rate: 6.88%")
    DISPLAY("Number of Year: 2-5")
END FUNCTION
```



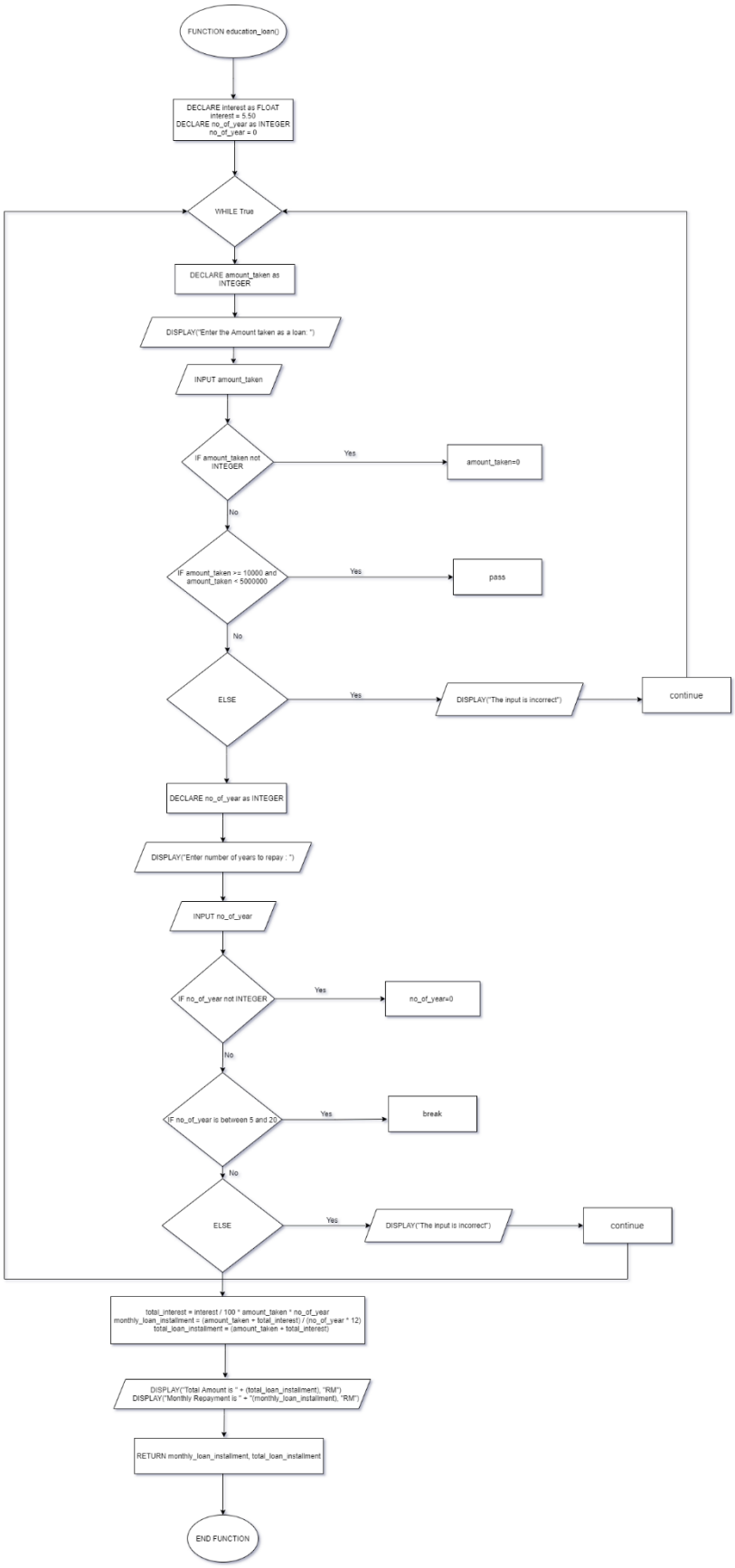
FUNCTION loan_calu_ask

```
DEFINE FUNCTION loan_calu_ask():
    DECLARE loan_detail_ask as INTEGER
    DISPLAY("Which type of loan calculator you want to see")
    DISPLAY("For Education Loan, press 1")
    DISPLAY("For Car Loan, press 2")
    DISPLAY("For Home Loan press 3")
    DISPLAY("For Personal Loan press 4")
    DISPLAY("Enter a choice: ")
    INPUT loan_calu_ask
    IF loan_calu_ask not INTEGER
        loan_calu_ask =0
    ENDIF
    RETURN loan_calu_ask
END FUNCTION
```



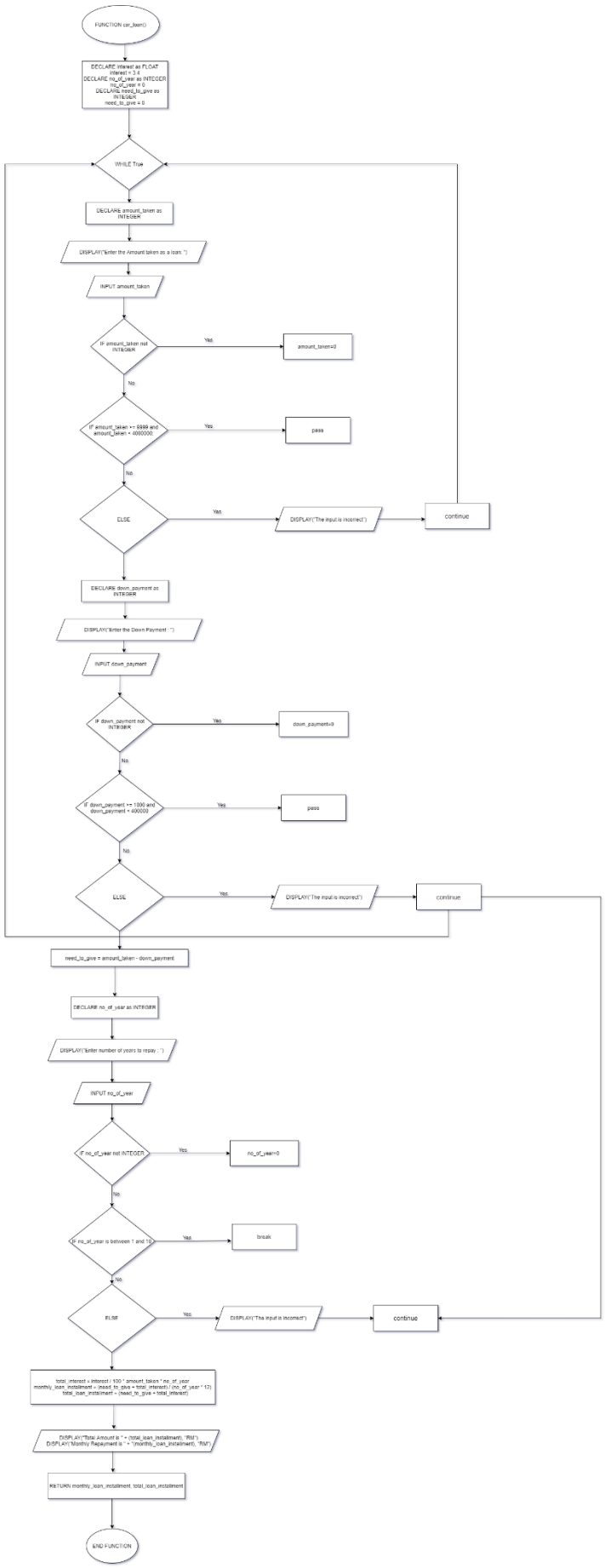
Function education_loan

```
DEFINE FUNCTION education_loan():
    DECLARE interest as FLOAT
    interest = 5.50
    DECLARE no_of_year as INTEGER
    no_of_year = 0

    WHILE TRUE:
        DECLARE amount_taken as INTEGER
        DISPLAY("Enter the Amount taken as a loan: ")
        INPUT amount_taken
        IF admin_control not INTEGER
        amount_taken=0
        IF amount_taken >= 10000 and amount_taken < 5000000:
            pass
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
        DECLARE no_of_year as INTEGER
        DISPLAY("Enter number of years to repay : ")
        INPUT no_of_year
        IF no_of_year not INTEGER
            no_of_year=0
        IF no_of_year is between 5 and 20
            break
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
    total_interest = interest / 100 * amount_taken * no_of_year

    monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
    total_loan_installment = (amount_taken + total_interest)

    DISPLAY("Total Amount is " + (total_loan_installment), "RM")
    DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
    RETURN monthly_loan_installment, total_loan_installment
    ENDWHILE
END FUNCTION
```


FUNCTION education_loan()
DECLARE interest as FLOAT
interest = 5.50
DECLARE no_of_year as INTEGER
no_of_year = 0
WHILE True
DECLARE amount_taken as INTEGER
DISPLAY("Enter the Amount taken as a loan: ")
INPUT amount_taken
IF amount_taken not INTEGER
Yes
amount_taken=0
No
IF amount_taken >= 10000 and amount_taken < 5000000
Yes
pass
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
DECLARE no_of_year as INTEGER
DISPLAY("Enter number of years to repay : ")
INPUT no_of_year
IF no_of_year not INTEGER
Yes
no_of_year=0
No
IF no_of_year is between 5 and 20
Yes
break
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
total_interest = interest / 100 * amount_taken * no_of_year
monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
total_loan_installment = (amount_taken + total_interest)
DISPLAY("Total Amount is " + (total_loan_installment), "RM")
DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
RETURN monthly_loan_installment, total_loan_installment
END FUNCTION

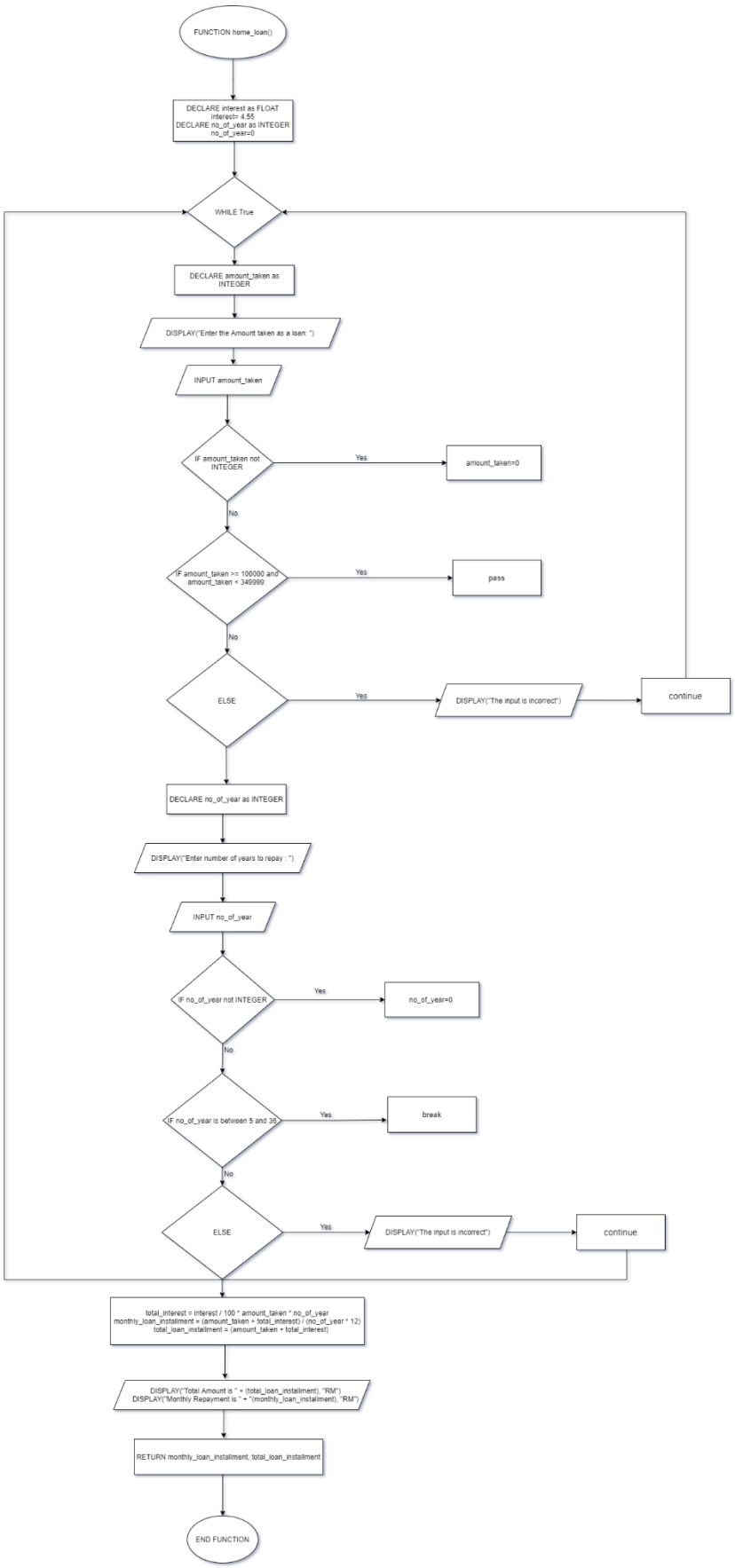
Function car_loan

```
DEFINE FUNCTION car_loan():
    DECLARE interest as FLOAT
    interest = 3.4
    DECLARE no_of_year as INTEGER
    no_of_year = 0
    DECLARE need_to_give as INTEGER
    need_to_give = 0

    WHILE True:
        DECLARE amount_taken as INTEGER
        DISPLAY("Enter the Amount taken as a loan: ")
        INPUT amount_taken
        IF amount_taken not INTEGER
        amount_taken=0
        IF amount_taken >= 9999 and amount_taken < 4000000:
            pass
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
        DECLARE down_payment as INTEGER
        DISPLAY("Enter the Down Payment : ")
        INPUT down_payment
        IF down_payment not INTEGER
            down_payment=0
        ENDIF
        IF down_payment >= 1000 and down_payment < 400000:
            pass
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
        need_to_give = amount_taken - down_payment

        DECLARE no of year as INTEGER

        DISPLAY("Enter number of years to repay : ")
        INPUT no_of_year
        IF no_of_year not INTEGER
        no_of_year=0
        IF no_of_year is between 1 and 10
            break
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
    total_interest = interest / 100 * amount_taken * no_of_year

    monthly_loan_installment = (need_to_give + total_interest) / (no_of_year * 12)
    total_loan_installment = (need_to_give + total_interest)

    DISPLAY("Total Amount is " + (total_loan_installment), "RM")
    DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
    RETURN monthly_loan_installment, total_loan_installment
    ENDWHILE
END FUNCTION
```


FUNCTION car_loan()
DECLARE interest as FLOAT
interest = 3.4
DECLARE no_of_year as INTEGER
no_of_year = 0
DECLARE need_to_give as INTEGER
need_to_give = 0
WHILE True
DECLARE amount_taken as INTEGER
DISPLAY("Enter the Amount taken as a loan: ")
INPUT amount_taken
IF amount_taken not INTEGER
Yes
amount_taken=0
No
IF amount_taken >= 5999 and amount_taken < 4000000
Yes
pass
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
DECLARE down_payment as INTEGER
DISPLAY("Enter the Down Payment : ")
INPUT down_payment
IF down_payment not INTEGER
Yes
down_payment=0
No
IF down_payment >= 1000 and down_payment < 400000
Yes
pass
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
need_to_give = amount_taken - down_payment
DECLARE no_of_year as INTEGER
DISPLAY("Enter number of years to repay : ")
INPUT no_of_year
IF no_of_year not INTEGER
Yes
no_of_year=0
No
IF no_of_year is between 1 and 10
Yes
break
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
total_interest = interest / 100 * amount_taken * no_of_year
monthly_loan_installment = (need_to_give + total_interest) / (no_of_year * 12)
total_loan_installment = (need_to_give + total_interest)
DISPLAY("Total Amount is " + (total_loan_installment), "RM")
DISPLAY("Monthly Repayment is " + (monthly_loan_installment), "RM")
RETURN monthly_loan_installment, total_loan_installment
END FUNCTION

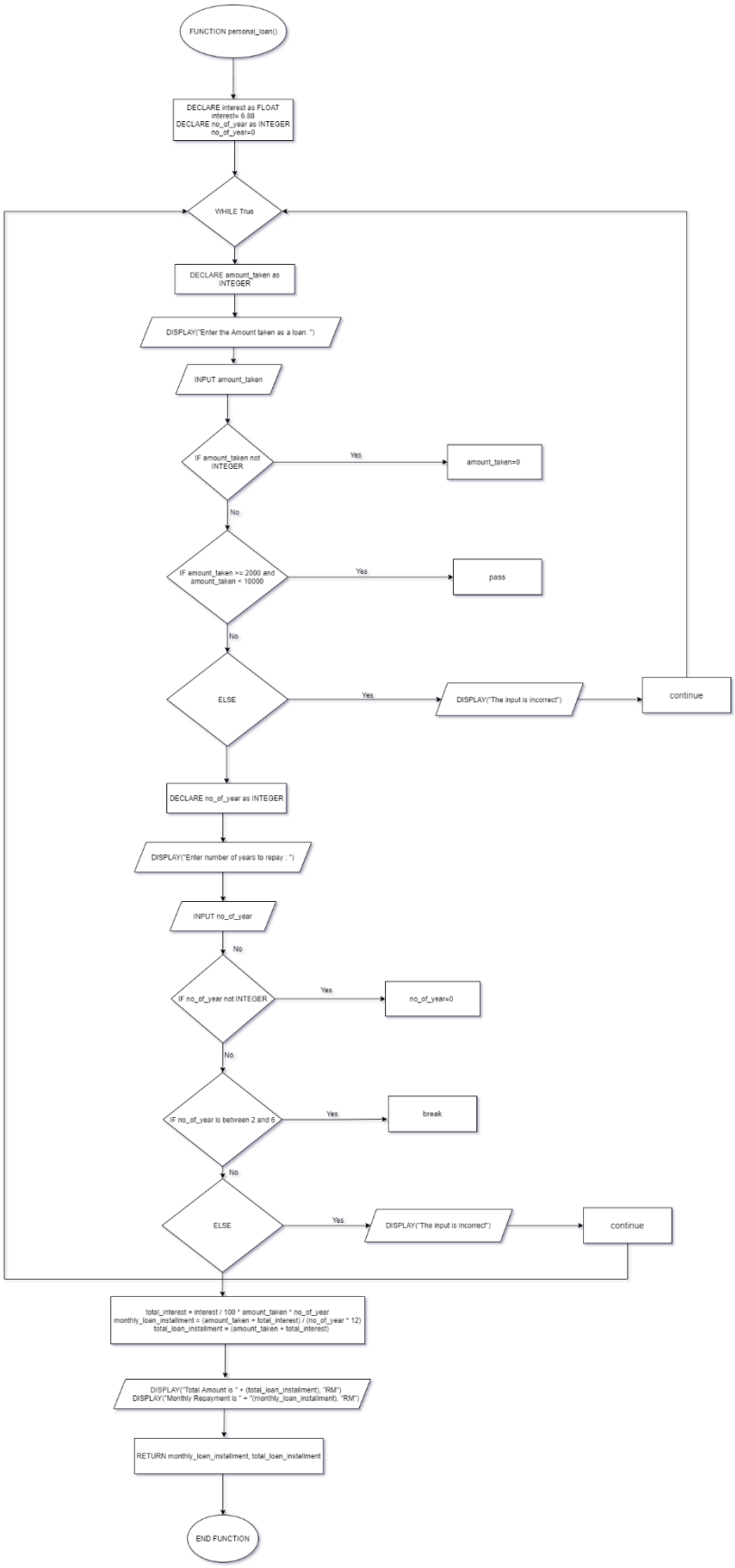
Function home loan

```
DEFINE FUNCTION home_loan():
    DECLARE interest as FLOAT
    interest= 4.55
    DECLARE no_of_year as INTEGER
    no_of_year=0

    WHILE True:
        DECLARE amount_taken as INTEGER
        DISPLAY("Enter the Amount taken as a loan: ")
        INPUT amount_taken
        IF amount_taken not INTEGER
        amount_taken=0
        IF amount_taken >= 100000 and amount_taken < 349999:
            pass
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
        DECLARE no_of_year as INTEGER
        DISPLAY("Enter number of years to repay : ")
        INPUT no_of_year
        IF no_of_year not INTEGER
        no_of_year=0
        IF no_of_year is between 5 and 36
            break
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
    total_interest = interest / 100 * amount_taken * no_of_year

    monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
    total_loan_installment = (amount_taken + total_interest)

    DISPLAY("Total Amount is " + (total_loan_installment), "RM")
    DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
    RETURN monthly_loan_installment, total_loan_installment
    ENDWHILE
END FUNCTION
```


FUNCTION home_loan()
DECLARE interest as FLOAT
interest= 4.55
DECLARE no_of_year as INTEGER
no_of_year=0
WHILE True
DECLARE amount_taken as INTEGER
DISPLAY("Enter the Amount taken as a loan: ")
INPUT amount_taken
IF amount_taken not INTEGER
Yes
amount_taken=0
No
IF amount_taken >= 100000 and amount_taken < 349999:
Yes
pass
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
DECLARE no_of_year as INTEGER
DISPLAY("Enter number of years to repay : ")
INPUT no_of_year
IF no_of_year not INTEGER
Yes
no_of_year=0
No
IF no_of_year is between 5 and 36:
Yes
break
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
total_interest = interest / 100 * amount_taken * no_of_year
monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
total_loan_installment = (amount_taken + total_interest)
DISPLAY("Total Amount is " + (total_loan_installment), "RM")
DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
RETURN monthly_loan_installment, total_loan_installment
END FUNCTION

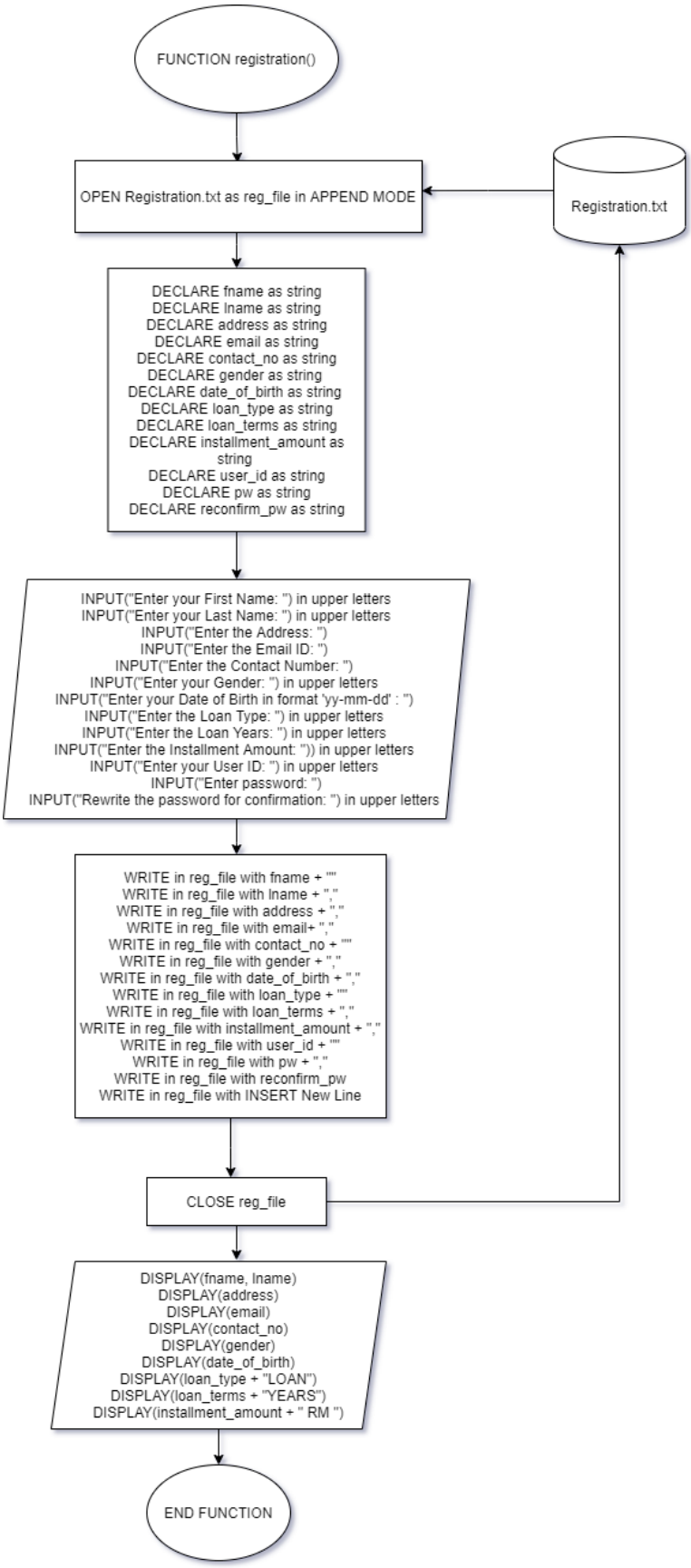
Function personal_loan

```
DEFINE FUNCTION personal_loan():
    DECLARE interest as FLOAT
    interest= 6.88
    DECLARE no_of_year as INTEGER
    no_of_year=0

    WHILE True:
        DECLARE amount_taken as INTEGER
        DISPLAY("Enter the Amount taken as a loan: ")
        INPUT amount_taken
        IF amount_taken not INTEGER
        amount_taken=0
        IF amount_taken >= 2000 and amount_taken < 10000:
            pass
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
        DECLARE no_of_year as INTEGER
        DISPLAY("Enter number of years to repay : ")
        INPUT no_of_year
        IF no_of_year not INTEGER
        no_of_year=0
        IF no_of_year is between 2 and 6
            break
        ELSE:
            DISPLAY("The input is incorrect")
            continue
        ENDIF
    total_interest = interest / 100 * amount_taken * no_of_year

    monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
    total_loan_installment = (amount_taken + total_interest)

    DISPLAY("Total Amount is " + (total_loan_installment), "RM")
    DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
    RETURN monthly_loan_installment, total_loan_installment
    ENDWHILE
END FUNCTION
```


FUNCTION personal_loan()
DECLARE interest as FLOAT
interest= 6.88
DECLARE no_of_year as INTEGER
no_of_year=0
WHILE True
DECLARE amount_taken as INTEGER
DISPLAY("Enter the Amount taken as a loan: ")
INPUT amount_taken
IF amount_taken not INTEGER
Yes
amount_taken=0
No
IF amount_taken >= 2000 and amount_taken < 10000
Yes
pass
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
DECLARE no_of_year as INTEGER
DISPLAY("Enter number of years to repay : ")
INPUT no_of_year
No
IF no_of_year not INTEGER
Yes
no_of_year=0
No
IF no_of_year is between 2 and 6
Yes
break
No
ELSE
Yes
DISPLAY("The input is incorrect")
continue
total_interest = interest / 100 * amount_taken * no_of_year
monthly_loan_installment = (amount_taken + total_interest) / (no_of_year * 12)
total_loan_installment = (amount_taken + total_interest)
DISPLAY("Total Amount is " + (total_loan_installment), "RM")
DISPLAY("Monthly Repayment is " + "(monthly_loan_installment), "RM")
RETURN monthly_loan_installment, total_loan_installment
END FUNCTION

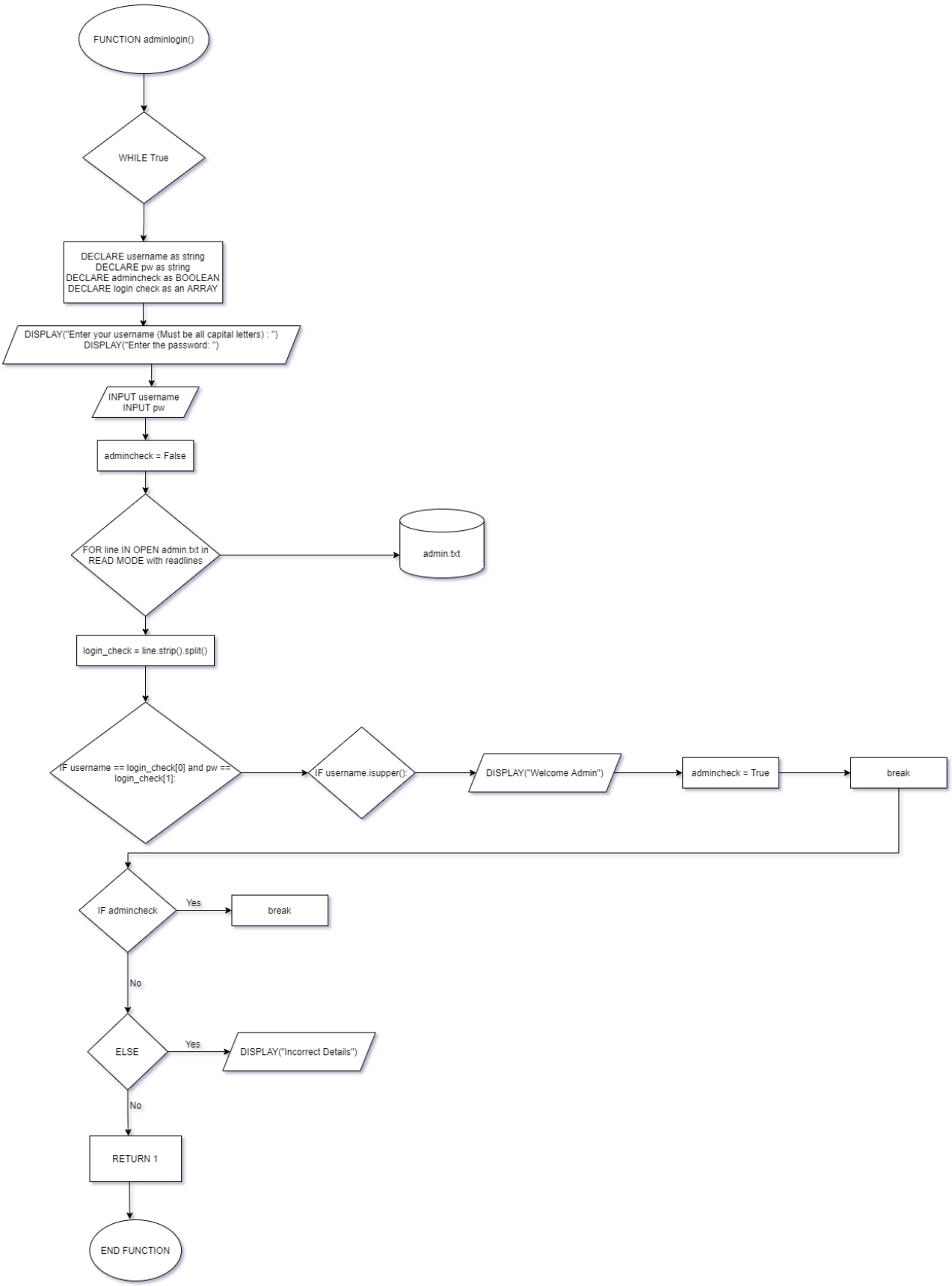
Function registration

```
DEFINE FUNCTION registration():
    OPEN Registration.txt as reg_file in APPEND MODE

    DECLARE fname as string
    DECLARE lname as string
    DECLARE address as string
    DECLARE email as string
    DECLARE contact_no as string
    DECLARE gender as string
    DECLARE date_of_birth as string
    DECLARE loan_type as string
    DECLARE loan_terms as string
    DECLARE installment_amount as string
    DECLARE user_id as string
    DECLARE pw as string
    DECLARE reconfirm_pw as string

    INPUT("Enter your First Name: ") in upper letters
    INPUT("Enter your Last Name: ") in upper letters
    INPUT("Enter the Address: ")
    INPUT("Enter the Email ID: ")
    INPUT("Enter the Contact Number: ")
    INPUT("Enter your Gender: ") in upper letters
    INPUT("Enter your Date of Birth in format 'yy-mm-dd' : ")
    INPUT("Enter the Loan Type: ") in upper letters
    INPUT("Enter the Loan Years: ") in upper letters
    INPUT("Enter the Installment Amount: ")) in upper letters
    INPUT("Enter your User ID: ") in upper letters
    INPUT("Enter password: ")
    INPUT("Rewrite the password for confirmation: ") in upper letters

    WRITE in reg_file with fname + ""
    WRITE in reg_file with lname + ","
    WRITE in reg_file with address + ","
    WRITE in reg_file with email+ ","
    WRITE in reg_file with contact_no + ""
    WRITE in reg_file with gender + ","
    WRITE in reg_file with date_of_birth + ","
    WRITE in reg_file with loan_type + ""
    WRITE in reg_file with loan_terms + ","
    WRITE in reg_file with installment_amount + ","
    WRITE in reg_file with user_id + ""
    WRITE in reg_file with pw + ","
    WRITE in reg_file with reconfirm_pw
    WRITE in reg_file with INSERT New Line
    CLOSE reg_file


    DISPLAY(fname, lname)
    DISPLAY(address)
    DISPLAY(email)
    DISPLAY(contact_no)
    DISPLAY(gender)
    DISPLAY(date_of_birth)
    DISPLAY(loan_type + "LOAN")
    DISPLAY(loan_terms + "YEARS")
    DISPLAY(installment_amount + " RM ")
END FUNCTION
```


FUNCTION registration()
OPEN Registration.txt as reg_file in APPEND MODE
Registration.txt
DECLARE fname as string
DECLARE lname as string
DECLARE address as string
DECLARE email as string
DECLARE contact_no as string
DECLARE gender as string
DECLARE date_of_birth as string
DECLARE loan_type as string
DECLARE loan_terms as string
DECLARE installment_amount as string
DECLARE user_id as string
DECLARE pw as string
DECLARE reconfirm_pw as string
INPUT("Enter your First Name: ") in upper letters
INPUT("Enter your Last Name: ") in upper letters
INPUT("Enter the Address: ")
INPUT("Enter the Email ID: ")
INPUT("Enter the Contact Number: ")
INPUT("Enter your Gender: ") in upper letters
INPUT("Enter your Date of Birth in format 'yy-mm-dd' : ")
INPUT("Enter the Loan Type: ") in upper letters
INPUT("Enter the Loan Years: ") in upper letters
INPUT("Enter the Installment Amount: ")) in upper letters
INPUT("Enter your User ID: ") in upper letters
INPUT("Enter password: ")
INPUT("Rewrite the password for confirmation: ") in upper letters
WRITE in reg_file with fname + ""
WRITE in reg_file with lname + ","
WRITE in reg_file with address + ","
WRITE in reg_file with email+ ","
WRITE in reg_file with contact_no + ""
WRITE in reg_file with gender + ","
WRITE in reg_file with date_of_birth + ","
WRITE in reg_file with loan_type + ""
WRITE in reg_file with loan_terms + ","
WRITE in reg_file with installment_amount + ","
WRITE in reg_file with user_id + ""
WRITE in reg_file with pw + ","
WRITE in reg_file with reconfirm_pw
WRITE in reg_file with INSERT New Line
CLOSE reg_file
DISPLAY(fname, lname)
DISPLAY(address)
DISPLAY(email)
DISPLAY(contact_no)
DISPLAY(gender)
DISPLAY(date_of_birth)
DISPLAY(loan_type + "LOAN")
DISPLAY(loan_terms + "YEARS")
DISPLAY(installment_amount + " RM ")
END FUNCTION

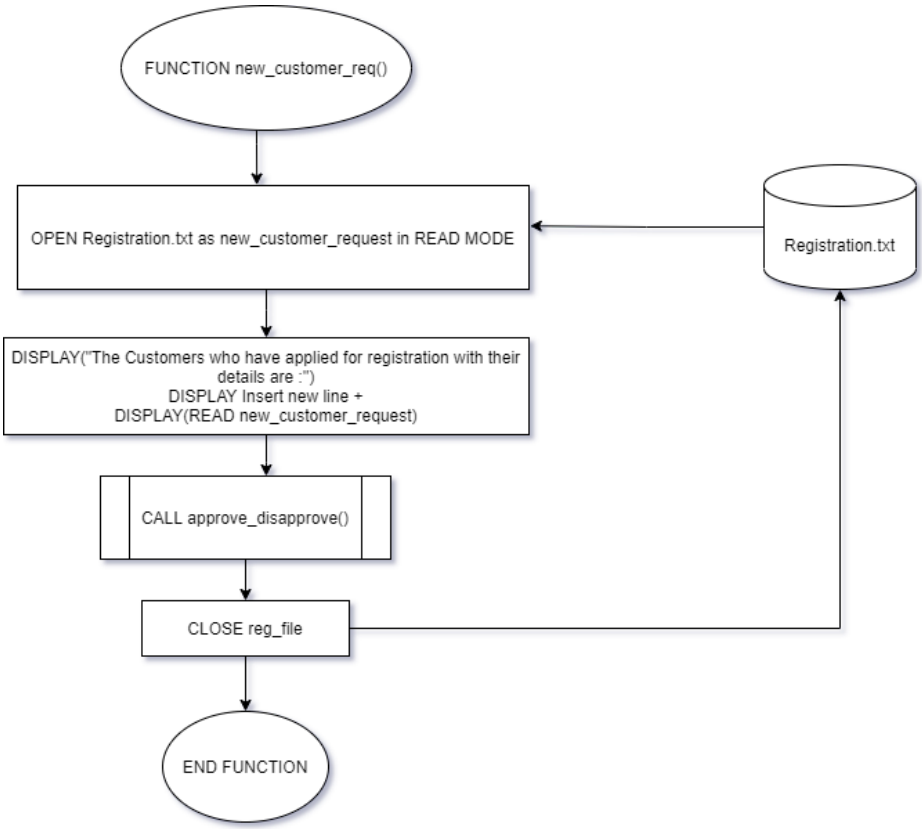
Function adminlogin

```
DEFINE FUNCTION adminlogin():
    WHILE True:
        DECLARE username as string
        DECLARE pw as string
        DECLARE admincheck as BOOLEAN
        DECLARE login check as an ARRAY

        DISPLAY("Enter your username (Must be all capital letters) : ")
        DISPLAY("Enter the password: ")
        INPUT username
        INPUT pw
        admincheck = False
        FOR line IN OPEN admin.txt in READ MODE with readlines
            login_check = line.strip().split()
            IF username == login_check[0] and pw == login_check[1]:
                    IF username.isupper():
                    DISPLAY("Welcome Admin")
                    admincheck = True
                    break
                    ENDIF
            ENDIF
        ENDFOR
        IF admincheck:
            break
        ELSE:
            DISPLAY("Incorrect Details")
        ENDIF
    ENDWHILE
    RETURN 1
END FUNCTION
```


FUNCTION adminlogin()
WHILE True
DECLARE username as string
DECLARE pw as string
DECLARE admincheck as BOOLEAN
DECLARE login check as an ARRAY
DISPLAY("Enter your username (Must be all capital letters) : ")
DISPLAY("Enter the password: ")
INPUT username
INPUT pw
admincheck = False
FOR line IN OPEN admin.txt in READ MODE with readlines
admin.txt
login_check = line.strip().split()
IF username == login_check[0] and pw == login_check[1]:
IF username.isupper():
DISPLAY("Welcome Admin")
admincheck = True
break
IF admincheck
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
No
RETURN 1
END FUNCTION

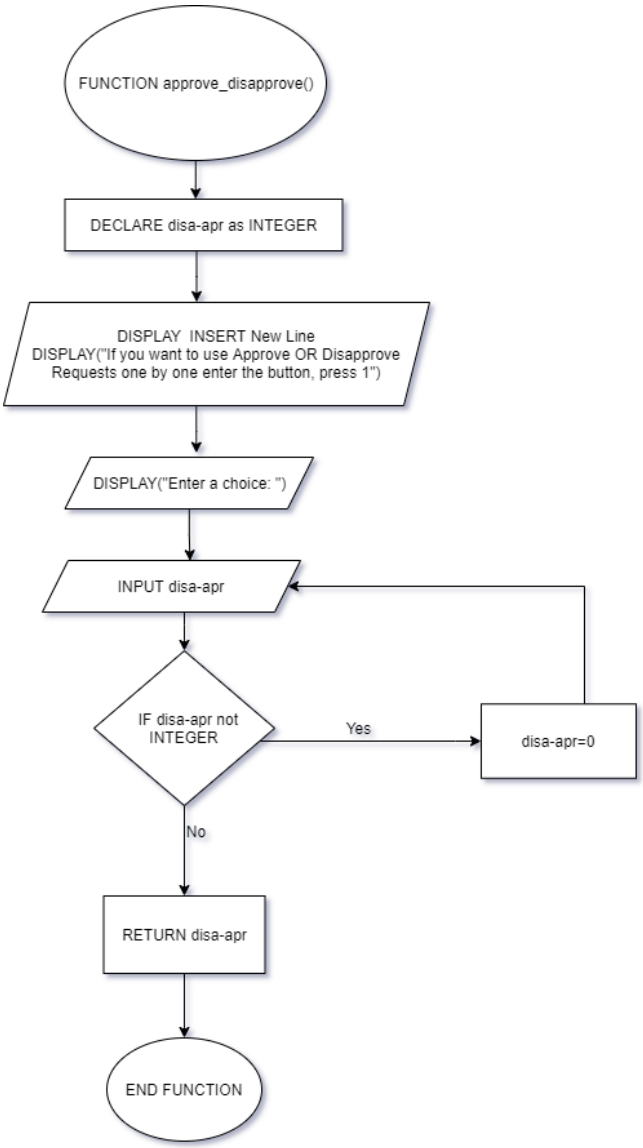
Function new_customer_req

```
DEFINE FUNCTION new_customer_req():
    OPEN Registration.txt as new_customer_request in READ MODE
    DISPLAY("The Customers who have applied for registration with their details are :")
    DISPLAY Insert new line +
    DISPLAY(READ new_customer_request)
    CALL approve_disapprove()
    CLOSE new_customer_request
END FUNCTION
```



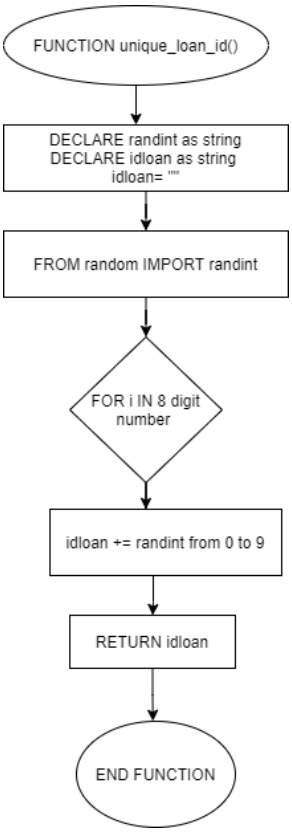
Function approve_disapprove

```
DEFINE FUNCTION approve_disapprove():
    DECLARE disa-apr as INTEGER
    DISPLAY  INSERT New Line
    DISPLAY("If you want to use Approve OR Disapprove Requests one by one enter the button, press 1")
    DISPLAY("Enter a choice: ")
    INPUT disa-apr
    IF disa-apr not INTEGER
        disa-apr=0
    ELDIF
    RETURN disa-apr
END FUNCTION
```



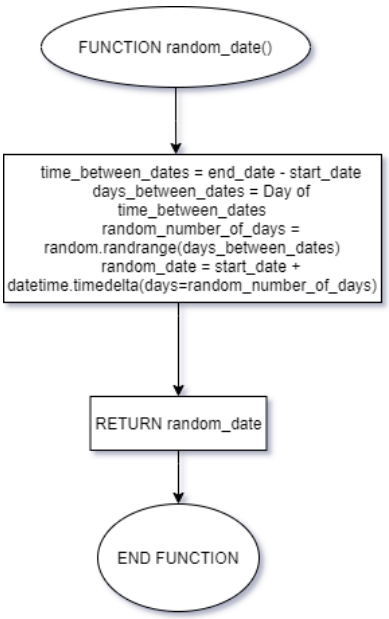
Function unique_loan_id

```
DEFINE FUNCTION unique_loan_id():
    DECLARE randint as string
    DECLARE idloan as string
    idloan= ""
    FROM random IMPORT randint
    FOR i IN 8 digit number
        idloan += randint from 0 to 9
    ENDFOR
    RETURN idloan
END FUNCTION
```



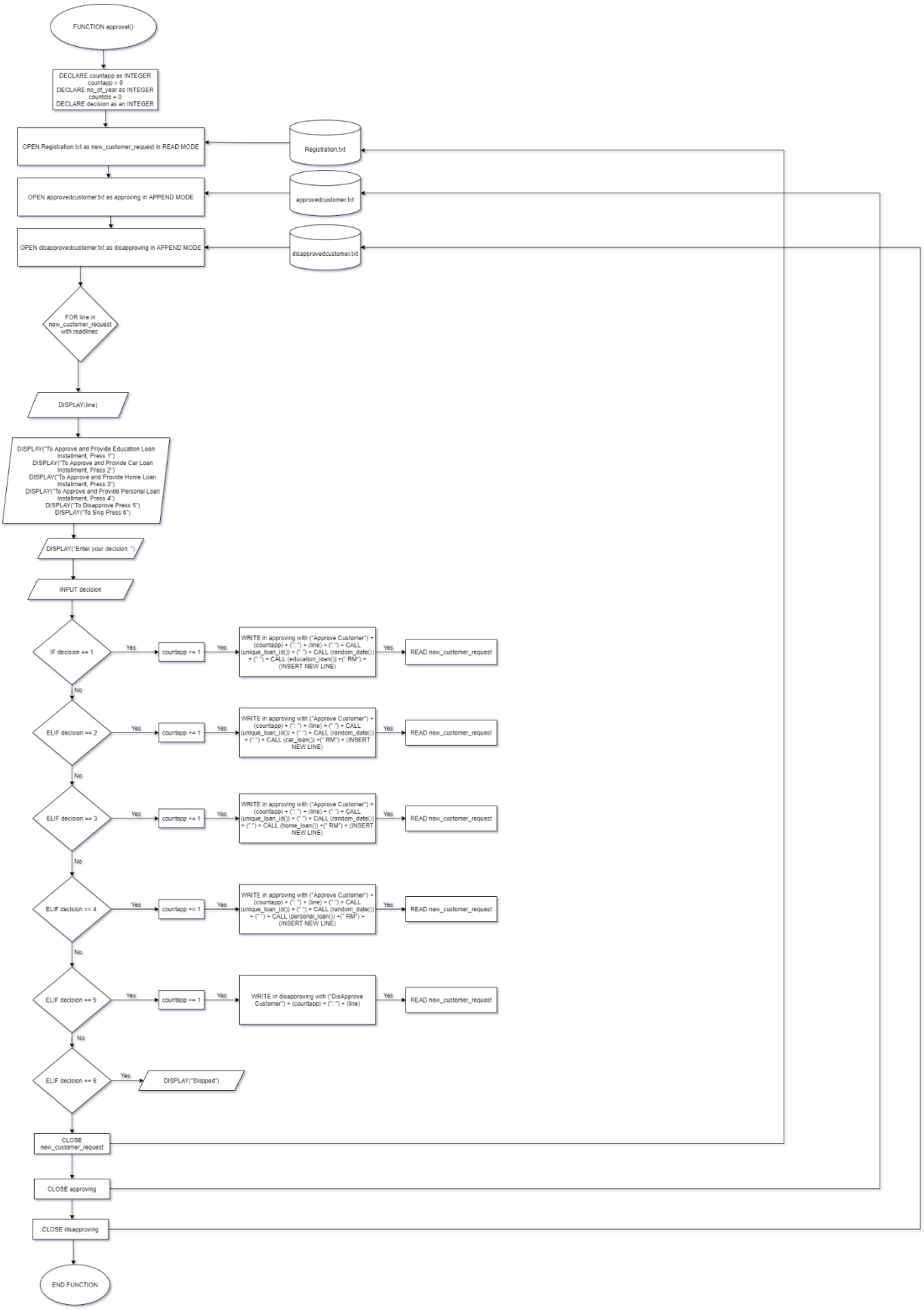
Function random_date

```
DEFINE FUNCTION random_date():
    start_date = datetime.date(2021, 3, 15)
    end_date = datetime.date(2021, 12, 1)

    time_between_dates = end_date - start_date
    days_between_dates = Day of time_between_dates
    random_number_of_days = random.randrange(days_between_dates)
    random_date = start_date + datetime.timedelta(days=random_number_of_days)
    RETURN random_date
END FUNCTION
```



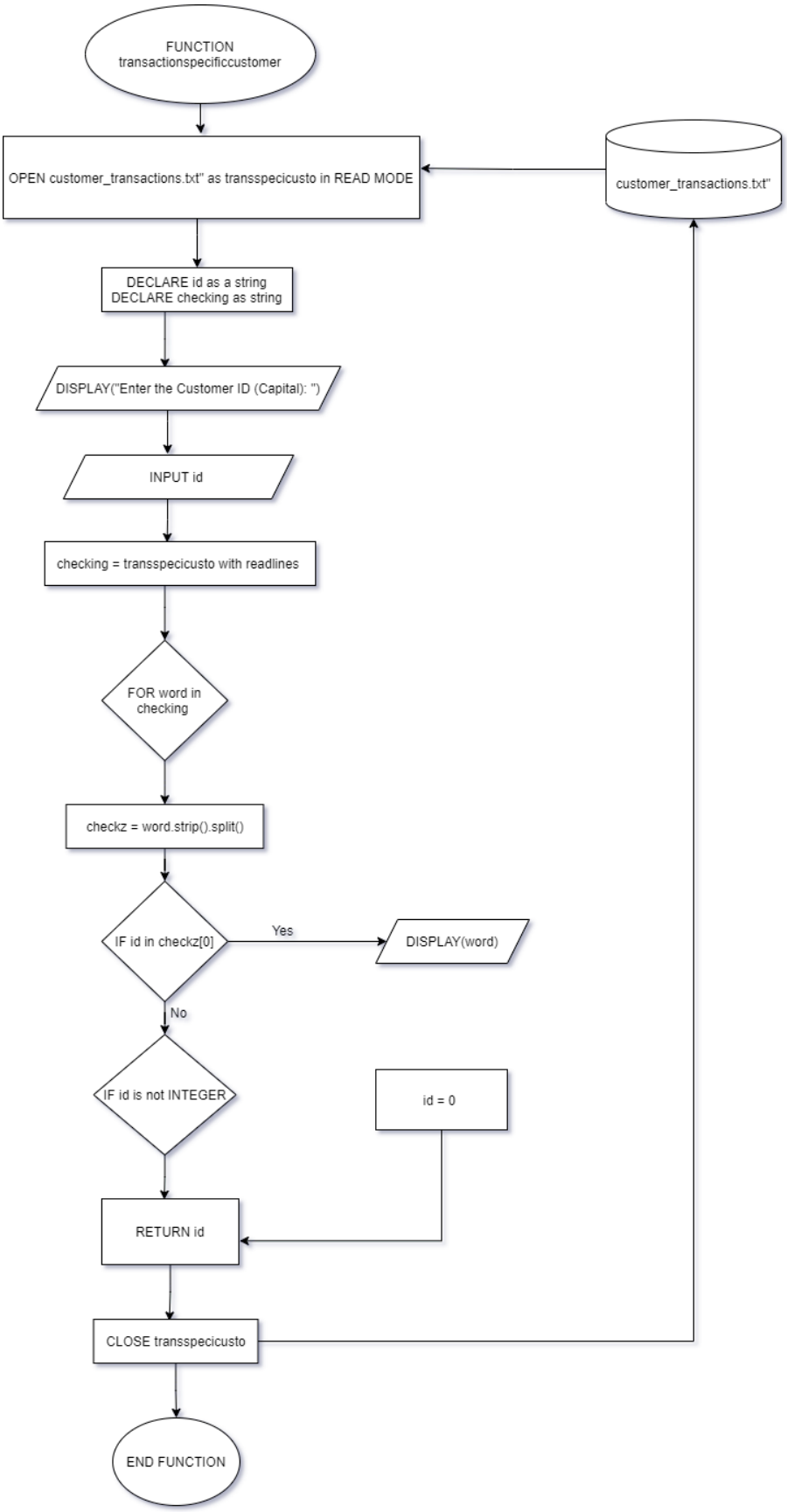
Function approval

```
DEFINE FUNCTION approval():
    DECLARE countapp as INTEGER
    countapp = 0
    DECLARE no_of_year as INTEGER
    countdis = 0
    DECLARE decision as an INTEGER
    OPEN Registration.txt as new_customer_request in READ MODE
    OPEN approvedcustomer.txt as approving in APPEND MODE
    OPEN disapprovedcustomer.txt as disapproving in APPEND MODE
    FOR line in new_customer_request with readlines
        DISPLAY(line)
        DISPLAY("To Approve and Provide Education Loan Installment, Press 1")
        DISPLAY("To Approve and Provide Car Loan Installment, Press 2")
        DISPLAY("To Approve and Provide Home Loan Installment, Press 3")
        DISPLAY("To Approve and Provide Personal Loan Installment, Press 4")
        DISPLAY("To Disapprove Press 5")
        DISPLAY("To Skip Press 6")
        DISPLAY("Enter your decision: ")
        INPUT decision
        IF decision == 1:
        countapp += 1
        WRITE in approving with ("Approve Customer") + (countapp) + (": ") + (line) + (" ") + CALL (unique_loan_id()) + (" ") + CALL (random_date()) + (" ") + CALL (education_loan()) +(" RM") + (INSERT NEW LINE)
        READ new_customer_request
        ELIF decision == 2:
        countapp += 1
        WRITE in approving with ("Approve Customer") + (countapp) + (": ") + (line) + (" ") + CALL (unique_loan_id()) + (" ") + CALL (random_date()) + (" ") + CALL (car_loan()) +(" RM") + (INSERT NEW LINE)
        READ new_customer_request
        ELIF decision == 3:
        countapp += 1
        WRITE in approving with ("Approve Customer") + (countapp) + (": ") + (line) + (" ") + CALL (unique_loan_id()) + (" ") + CALL (random_date()) + (" ") + CALL (home_loan()) +(" RM") + (INSERT NEW LINE)
        READ new_customer_request
        ELIF decision == 4:
        countapp += 1
        WRITE in approving with ("Approve Customer") + (countapp) + (": ") + (line) + (" ") + CALL (unique_loan_id()) + (" ") + CALL (random_date()) + (" ") + CALL (personal_loan()) +(" RM") + (INSERT NEW LINE)
        READ new_customer_request
        ELIF decision == 5:
        countapp += 1
        WRITE in disapproving with ("DisApprove Customer") + (countapp) + (": ") + (line)
        READ new_customer_request
        ELIF decision == 6:
            DISPLAY("Skipped")
        ENDIF
    ENDFOR
    CLOSE new_customer_request
    CLOSE approving
    CLOSE disapproving
END FUNCTION
```


FUNCTION approval()
DECLARE countapp as INTEGER
countapp = 0
DECLARE no_of_year as INTEGER
countdis = 0
DECLARE decision as an INTEGER
OPEN Registration.txt as new_customer_request in READ MODE
Registration.txt
OPEN approvedcustomer.txt as approving in APPEND MODE
approvedcustomer.txt
OPEN disapprovedcustomer.txt as disapproving in APPEND MODE
disapprovedcustomer.txt
FOR line in new_customer_request with readlines
DISPLAY(line)
DISPLAY("To Approve and Provide Education Loan Installment, Press 1")
DISPLAY("To Approve and Provide Car Loan Installment, Press 2")
DISPLAY("To Approve and Provide Home Loan Installment, Press 3")
DISPLAY("To Approve and Provide Personal Loan Installment, Press 4")
DISPLAY("To Disapprove Press 5")
DISPLAY("To Skip Press 6")
DISPLAY("Enter your decision: ")
INPUT decision
IF decision == 1
Yes
countapp += 1
Yes
WRITE in approving with ("Approve Customer") + (countapp) + (",") + (line) + (",") + CALL (unique_loan_id()) + (",") + CALL (random_date()) + (",") + CALL (education_loan()) +(" RM") + (INSERT NEW LINE)
Yes
READ new_customer_request
No
ELIF decision == 2
Yes
countapp += 1
Yes
WRITE in approving with ("Approve Customer") + (countapp) + (",") + (line) + (",") + CALL (unique_loan_id()) + (",") + CALL (random_date()) + (",") + CALL (car_loan()) +(" RM") + (INSERT NEW LINE)
Yes
READ new_customer_request
No
ELIF decision == 3
Yes
countapp += 1
Yes
WRITE in approving with ("Approve Customer") + (countapp) + (",") + (line) + (",") + CALL (unique_loan_id()) + (",") + CALL (random_date()) + (",") + CALL (home_loan()) +(" RM") + (INSERT NEW LINE)
Yes
READ new_customer_request
No
ELIF decision == 4:
Yes
countapp += 1
Yes
WRITE in approving with ("Approve Customer") + (countapp) + (",") + (line) + (",") + CALL (unique_loan_id()) + (",") + CALL (random_date()) + (",") + CALL (personal_loan()) +(" RM") + (INSERT NEW LINE)
Yes
READ new_customer_request
No
ELIF decision == 5:
Yes
countapp += 1
Yes
WRITE in disapproving with ("DisApprove Customer") + (countapp) + (",") + (line)
Yes
READ new_customer_request
No
ELIF decision == 6:
Yes
DISPLAY("Skipped")
CLOSE new_customer_request
CLOSE approving
CLOSE disapproving
END FUNCTION

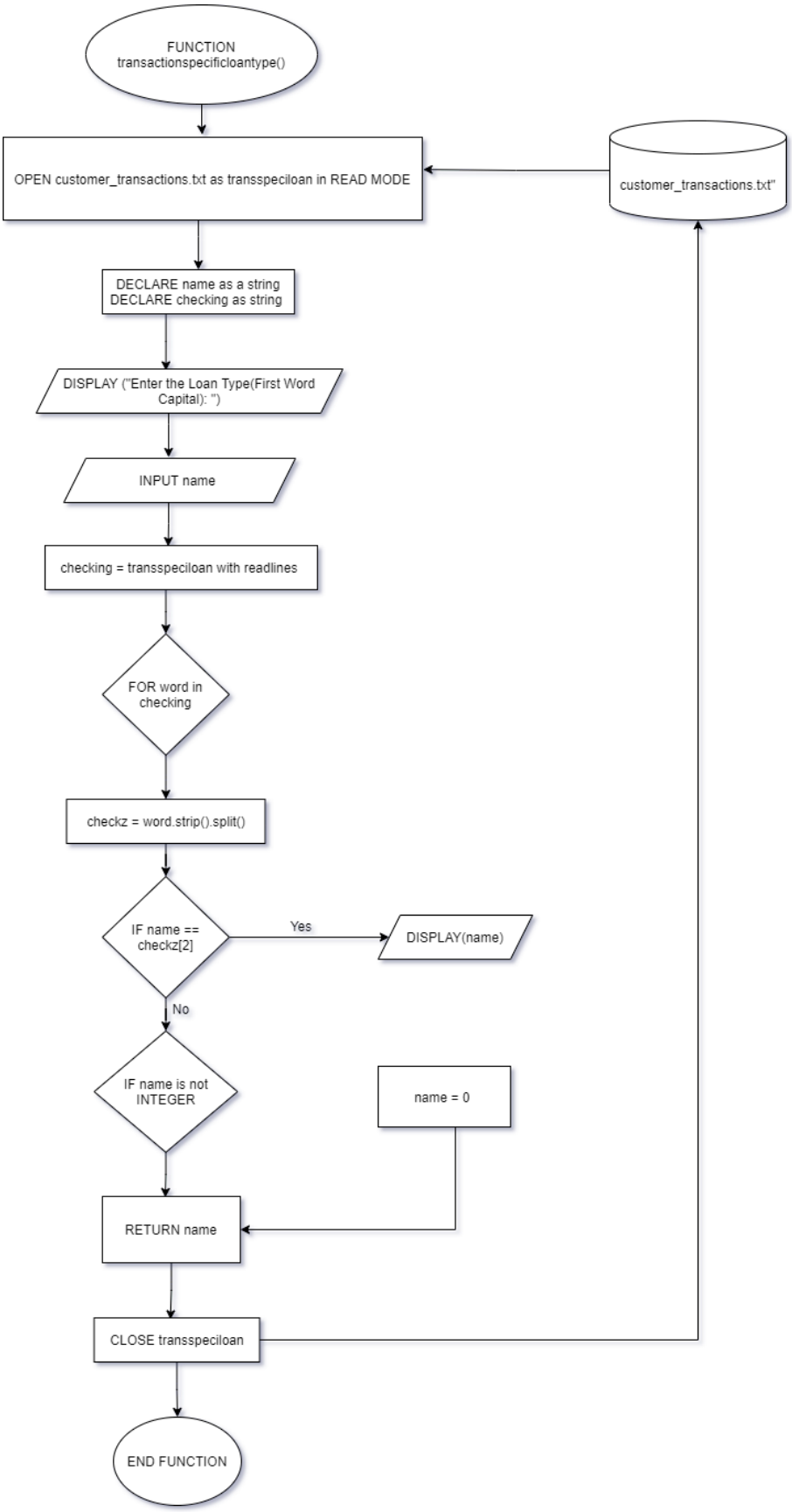
Function transactionspecificcustomer

```
DEFINE FUNCTION transactionspecificcustomer():
    OPEN customer_transactions.txt" as transspecicusto in READ MODE
    DECLARE id as a string
    DECLARE checking as string
    DISPLAY("Enter the Customer ID (Capital): ")
    INPUT id
    checking = transspecicusto with readlines
    FOR word in checking
        checkz = word.strip().split()
        IF id in checkz[0]:
            DISPLAY(word)
        ENDIF
    ENDFOR
    IF id is not INTEGER
        id = 0
    ENDIF
    RETURN id
    CLOSE transspecicusto
END FUNCTION
```


FUNCTION
transactionspecificcustomer
OPEN customer_transactions.txt" as transspecicusto in READ MODE
customer_transactions.txt"
DECLARE id as a string
DECLARE checking as string
DISPLAY("Enter the Customer ID (Capital): ")
INPUT id
checking = transspecicusto with readlines
FOR word in
checking
checkz = word.strip().split()
IF id in checkz[0]
Yes
DISPLAY(word)
No
IF id is not INTEGER
id = 0
RETURN id
CLOSE transspecicusto
END FUNCTION

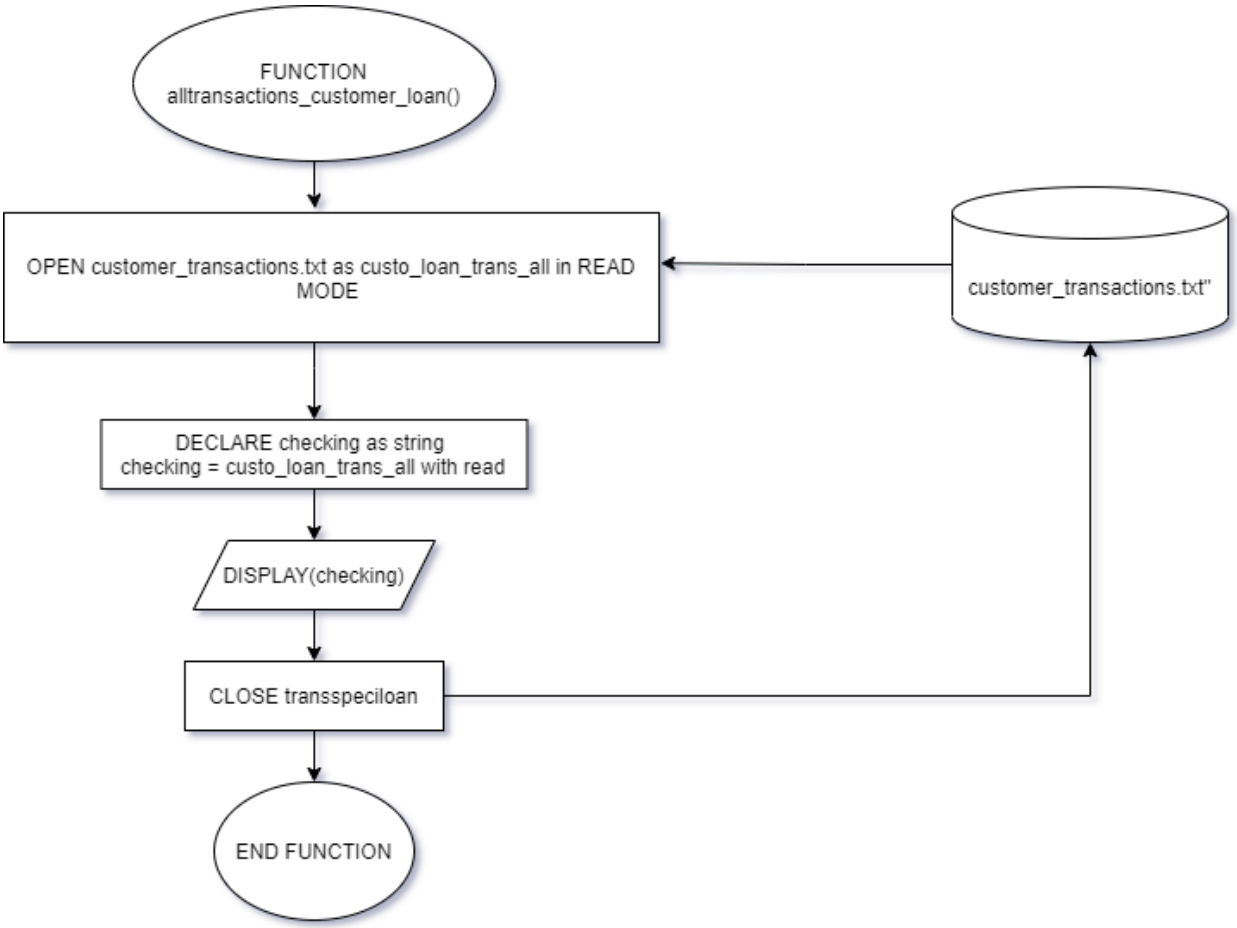
Function transactionspecificloantype

```
DEFINE FUNCTION transactionspecificloantype():
    OPEN customer_transactions.txt as transspeciloan in READ MODE
    DECLARE name as a string
    DECLARE checking as string
    DISPLAY ("Enter the Loan Type(First Word Capital): ")
    INPUT name
    checking = transspeciloan with readlines
    FOR word in checking
        checkz = word.strip().split()
        IF name == checkz[2]:
            DISPLAY(word)
        ENDIF
    ENDFOR
    IF name is not INTEGER
        name = 0
    ENDIF
    RETURN name
    CLOSE transspeciloan
END FUNCTION
```


FUNCTION transactionspecificloantype()
OPEN customer_transactions.txt as transspeciloan in READ MODE
customer_transactions.txt"
DECLARE name as a string
DECLARE checking as string
DISPLAY ("Enter the Loan Type(First Word Capital): ")
INPUT name
checking = transspeciloan with readlines
FOR word in checking
checkz = word.strip().split()
IF name == checkz[2]
Yes
DISPLAY(name)
No
IF name is not INTEGER
name = 0
RETURN name
CLOSE transspeciloan
END FUNCTION

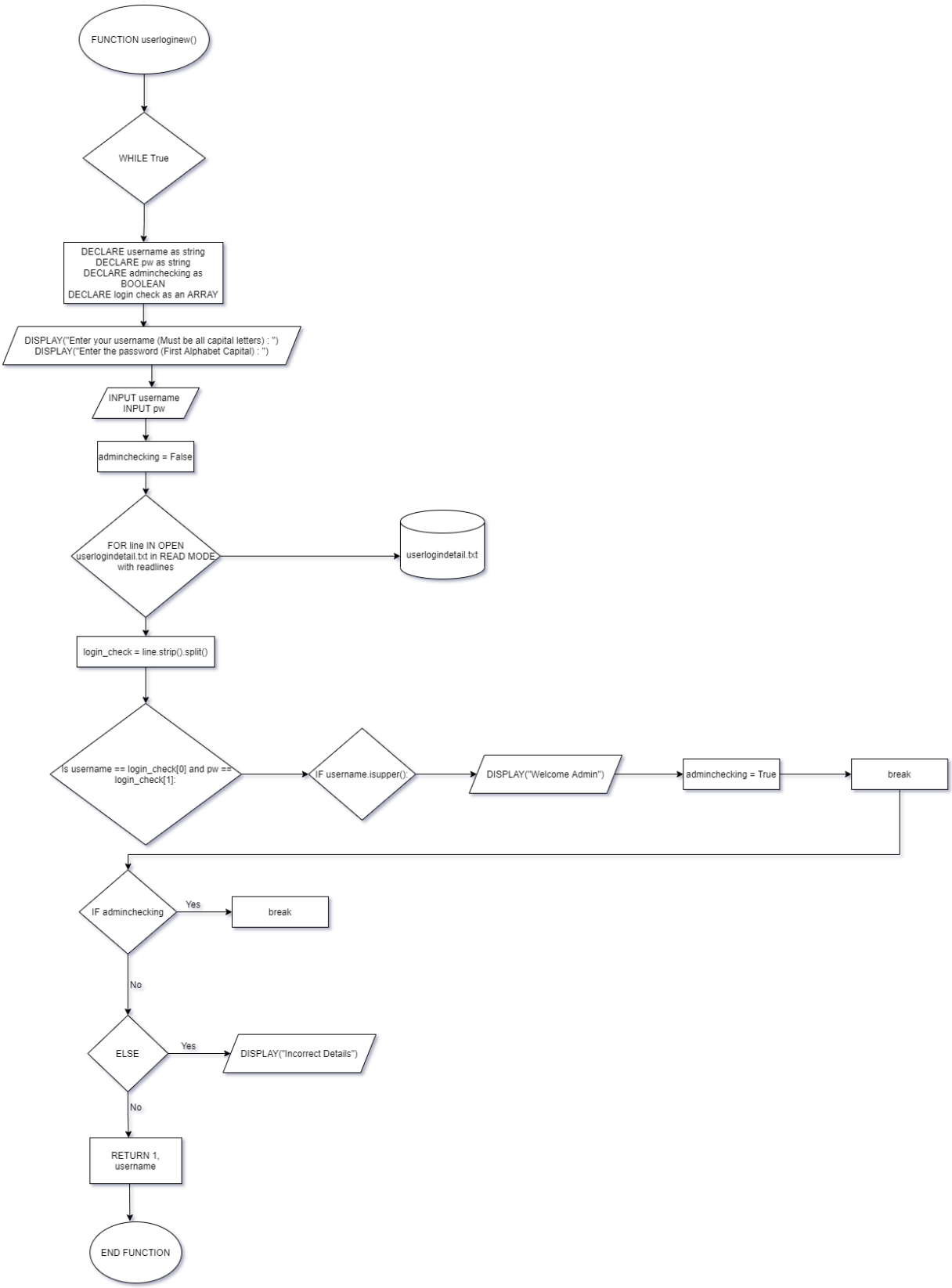
Function alltransactions_customer_loan

```
DEFINE FUNCTION alltransactions_customer_loan():
    OPEN customer_transactions.txt as custo_loan_trans_all in READ MODE
    DECLARE checking as string
    checking = custo_loan_trans_all with read
    DISPLAY(checking)
    CLOSE custo_loan_trans_all
END FUNCTION
```



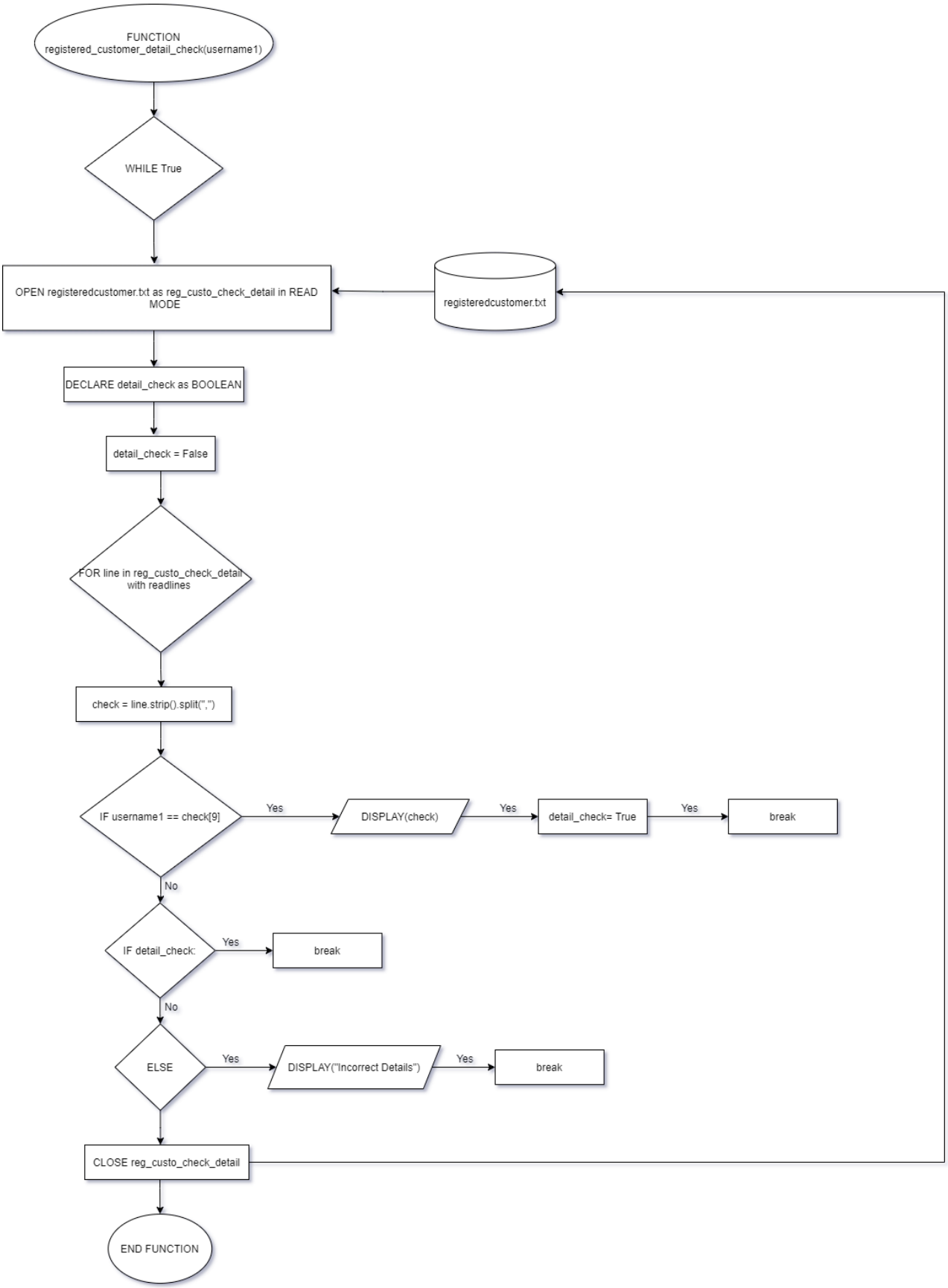
Function userloginew

```
DEFINE FUNCTION userloginew():
    WHILE TRUE:
        DECLARE username as string
        DECLARE pw as string
        DECLARE adminchecking as BOOLEAN
        DECLARE login check as an ARRAY

        DISPLAY("Enter your username (Must be all capital letters) : ")
        DISPLAY("Enter the password (First Alphabet Capital) : ")
        INPUT username
        INPUT pw
        adminchecking = False
        FOR line IN OPEN userlogindetail.txt in READ MODE with readlines

            login_check = line.strip().split()
            IF username == login_check[0] and pw == login_check[1]:
                    IF username.isupper():
                    print("Welcome Admin")
                    adminchecking = True
                    break
                    ENDIF
            ENDIF
        ENDFOR
        IF adminchecking:
            break
        ELSE:
            DISPLAY("Incorrect Details")
        ENDIF
    ENDWHILE
    RETURN 1, username
END FUNCTION
```


FUNCTION userloginew()
WHILE True
DECLARE username as string
DECLARE pw as string
DECLARE adminchecking as BOOLEAN
DECLARE login check as an ARRAY
DISPLAY("Enter your username (Must be all capital letters) : ")
DISPLAY("Enter the password (First Alphabet Capital) : ")
INPUT username
INPUT pw
adminchecking = False
FOR line IN OPEN userlogindetail.txt in READ MODE with readlines
userlogindetail.txt
login_check = line.strip().split()
Is username == login_check[0] and pw == login_check[1]:
IF username.isupper():
DISPLAY("Welcome Admin")
adminchecking = True
break
IF adminchecking
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
No
RETURN 1, username
END FUNCTION

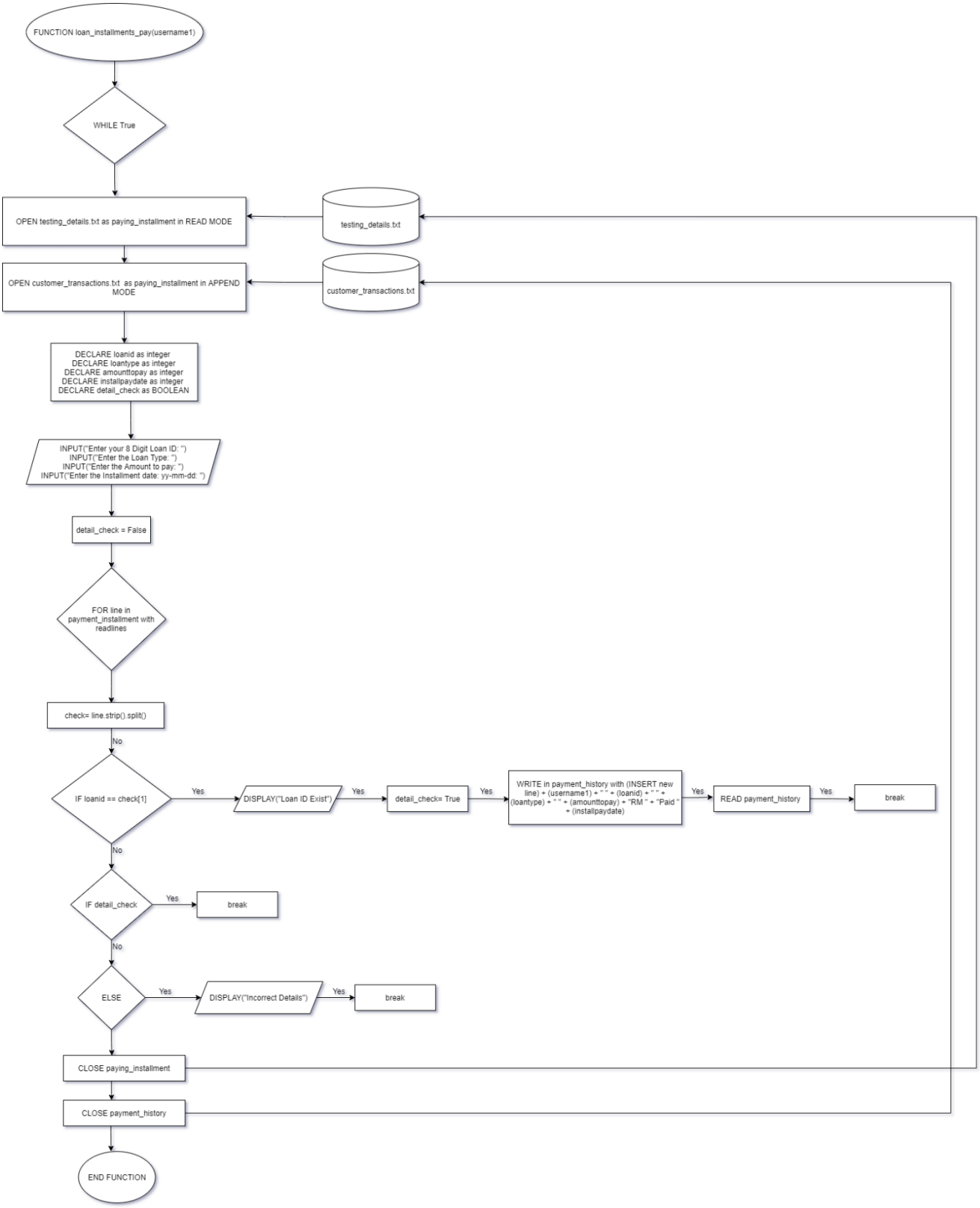
Function registered_customer_detail_check(username1)

```
DEFINE FUNCTION registered_customer_detail_check(username1):
    WHILE TRUE:
        OPEN registeredcustomer.txt as reg_custo_check_detail in READ MODE

        DECLARE detail_check as BOOLEAN
        detail_check = False
        FOR line in reg_custo_check_detail with readlines
            check = line.strip().split(",")
            IF username1 == check[9]
                DISPLAY(check)
                detail_check= True
                break
            ENDIF
        ENDFOR
        IF detail_check:
            break
        ELSE:
            DISPLAY("Incorrect Details")
            break
        ENDIF
        CLOSE reg_custo_check_detail
    ENDWHILE

END FUNCTION
```


FUNCTION registered_customer_detail_check(username1)
WHILE True
OPEN registeredcustomer.txt as reg_custo_check_detail in READ MODE
registeredcustomer.txt
DECLARE detail_check as BOOLEAN
detail_check = False
FOR line in reg_custo_check_detail with readlines
check = line.strip().split(",")
IF username1 == check[9]
Yes
DISPLAY(check)
Yes
detail_check= True
Yes
break
No
IF detail_check:
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
Yes
break
CLOSE reg_custo_check_detail
END FUNCTION

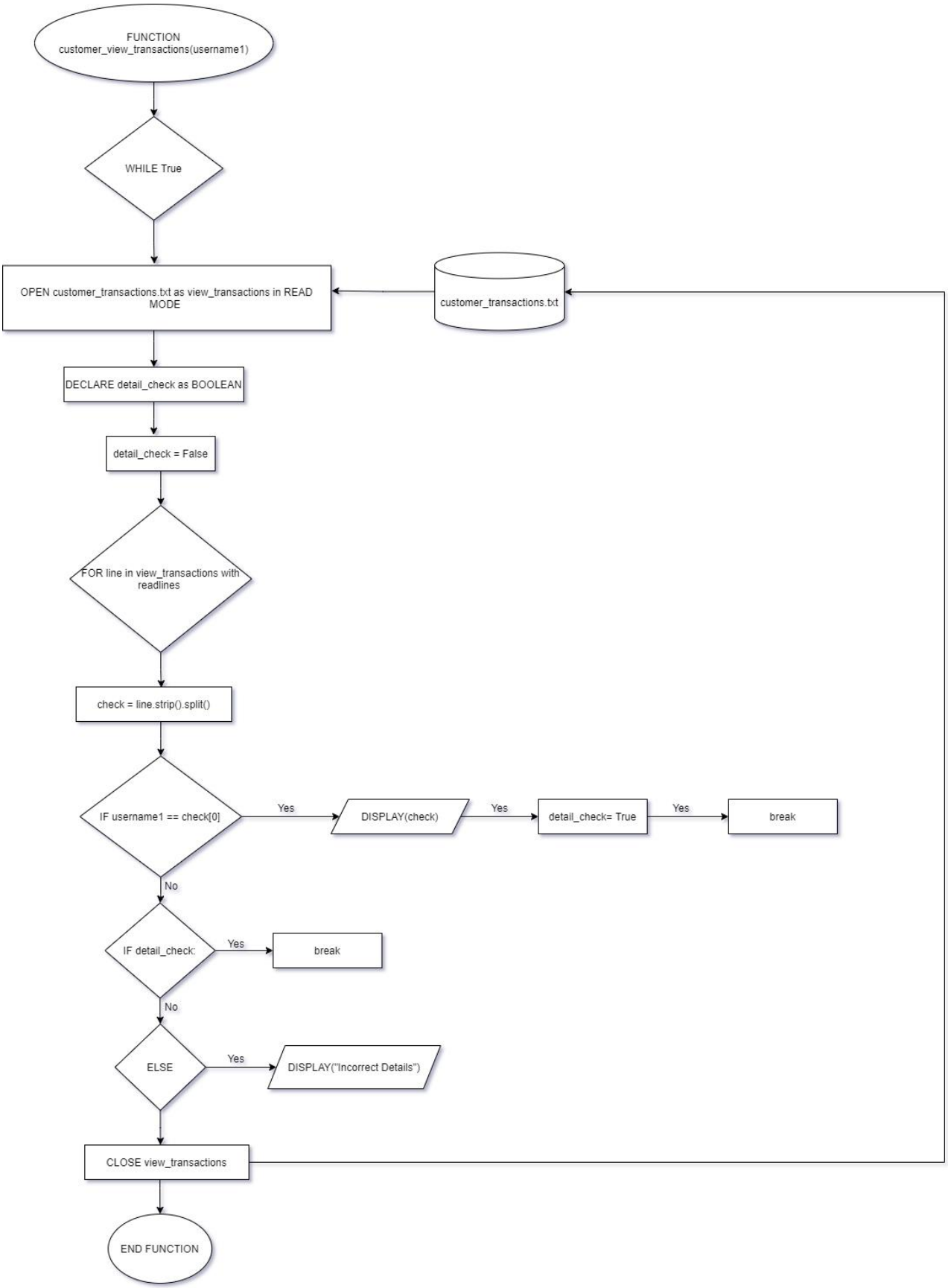
Function loan_installments_pay(username1)

```
DEFINE FUNCTION loan_installments_pay(username1):
    WHILE TRUE:
        OPEN testing_details.txt as paying_installment in READ MODE
        OPEN customer_transactions.txt  as paying_installment in APPEND MODE

        DECLARE loanid as integer
        DECLARE loantype as integer
        DECLARE amounttopay as integer
        DECLARE installpaydate as integer
        DECLARE detail_check as BOOLEAN

        INPUT("Enter your 8 Digit Loan ID: ")
        INPUT("Enter the Loan Type: ")
        INPUT("Enter the Amount to pay: ")
        INPUT("Enter the Installment date: yy-mm-dd: ")

        detail_check= False

        FOR line in payment_installment with readlines
            check= line.strip().split()

            IF loanid == check[1]:
                DISPLAY("Loan ID Exist")
                detail_check= True
                WRITE in payment_history with (INSERT new line) + (username1) + " " + (loanid) + " " + (loantype) + " " + (amounttopay) + "RM " + "Paid " + (installpaydate)
                READ payment_history
                break
            ENDIF
        ENDFOR
        IF detail_check:
            break
        ELSE:
            DISPLAY("Incorrect Details")
        ENDIF
        CLOSE paying_installment
        CLOSE payment_history
    ENDWHILE
END FUNCTION
```


FUNCTION loan_installments_pay(username1)
WHILE True
OPEN testing_details.txt as paying_installment in READ MODE
testing_details.txt
OPEN customer_transactions.txt as paying_installment in APPEND MODE
customer_transactions.txt
DECLARE loanid as integer
DECLARE loantype as integer
DECLARE amounttopay as integer
DECLARE installpaydate as integer
DECLARE detail_check as BOOLEAN
INPUT("Enter your 8 Digit Loan ID: ")
INPUT("Enter the Loan Type: ")
INPUT("Enter the Amount to pay: ")
INPUT("Enter the Installment date: yy-mm-dd: ")
detail_check = False
FOR line in payment_installment with readlines
check= line.strip().split()
No
IF loanid == check[1]
Yes
DISPLAY("Loan ID Exist")
Yes
detail_check= True
Yes
WRITE in payment_history with (INSERT new line) + (username1) + " " + (loanid) + " " + (loantype) + " " + (amounttopay) + "RM " + "Paid " + (installpaydate)
Yes
READ payment_history
Yes
break
No
IF detail_check
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
Yes
break
CLOSE paying_installment
CLOSE payment_history
END FUNCTION

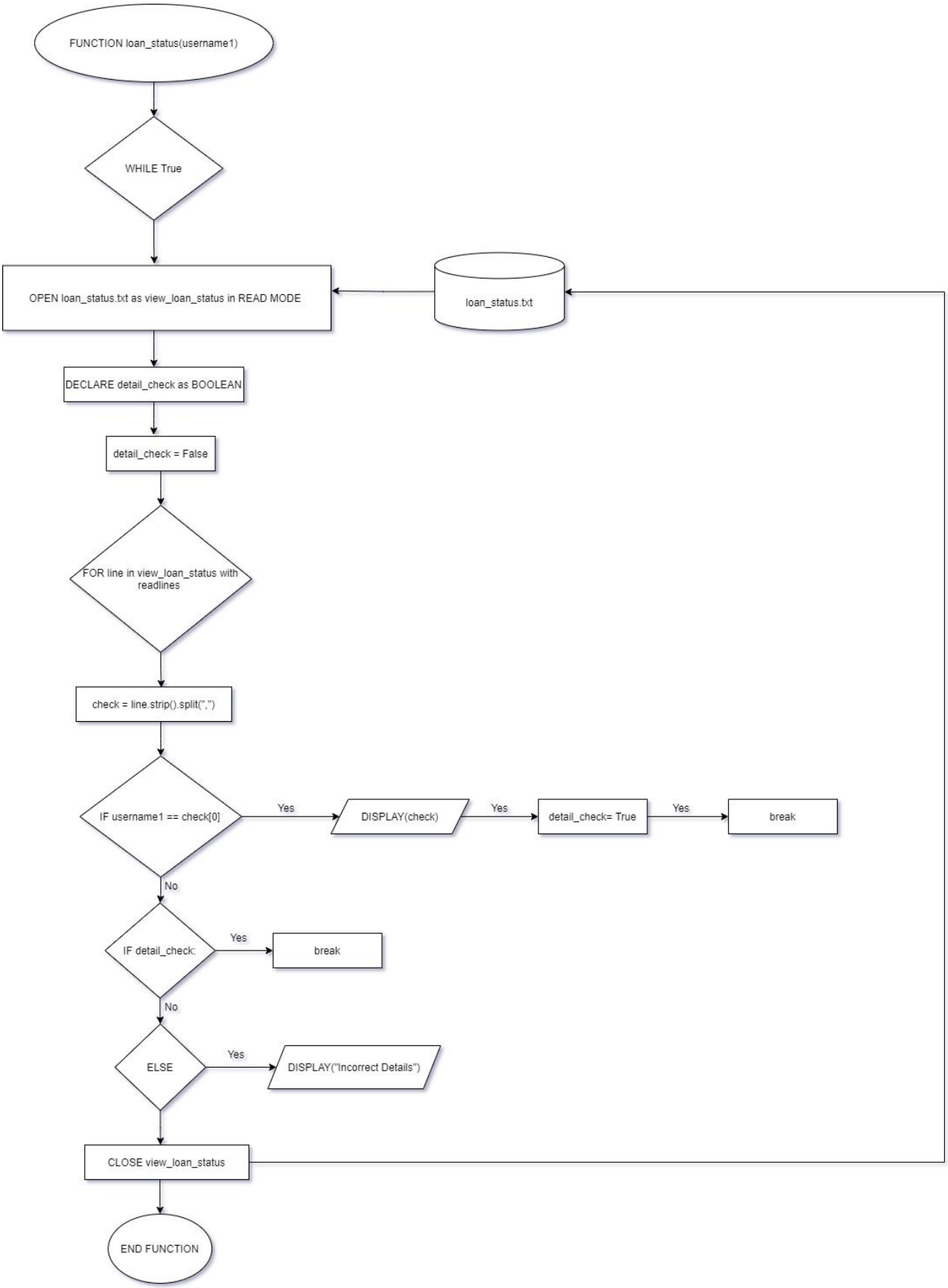
Function customer_view_transactions(username1)

```
DEFINE FUNCTION customer_view_transactions(username1):
    WHILE TRUE:
        OPEN customer_transactions.txt as view_transactions in READ MODE

        DECLARE detail_check as BOOLEAN
        detail_check = False
        FOR line in view_transactions with readlines
            check = line.strip().split()
            IF username1 == check[0]
                DISPLAY(check)
                detail_check = True
                break
            ENDIF
        ENDFOR
        IF detail_check:
            break
        ELSE:
            DISPLAY("Incorrect Details")
        ENDIF
        CLOSE view_transactions
    ENDWHILE
END FUNCTION
```


FUNCTION customer_view_transactions(username1)
WHILE True
OPEN customer_transactions.txt as view_transactions in READ MODE
customer_transactions.txt
DECLARE detail_check as BOOLEAN
detail_check = False
FOR line in view_transactions with readlines
check = line.strip().split()
IF username1 == check[0]
Yes
DISPLAY(check)
Yes
detail_check= True
Yes
break
No
IF detail_check:
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
CLOSE view_transactions
END FUNCTION

Function loan_status(username1)

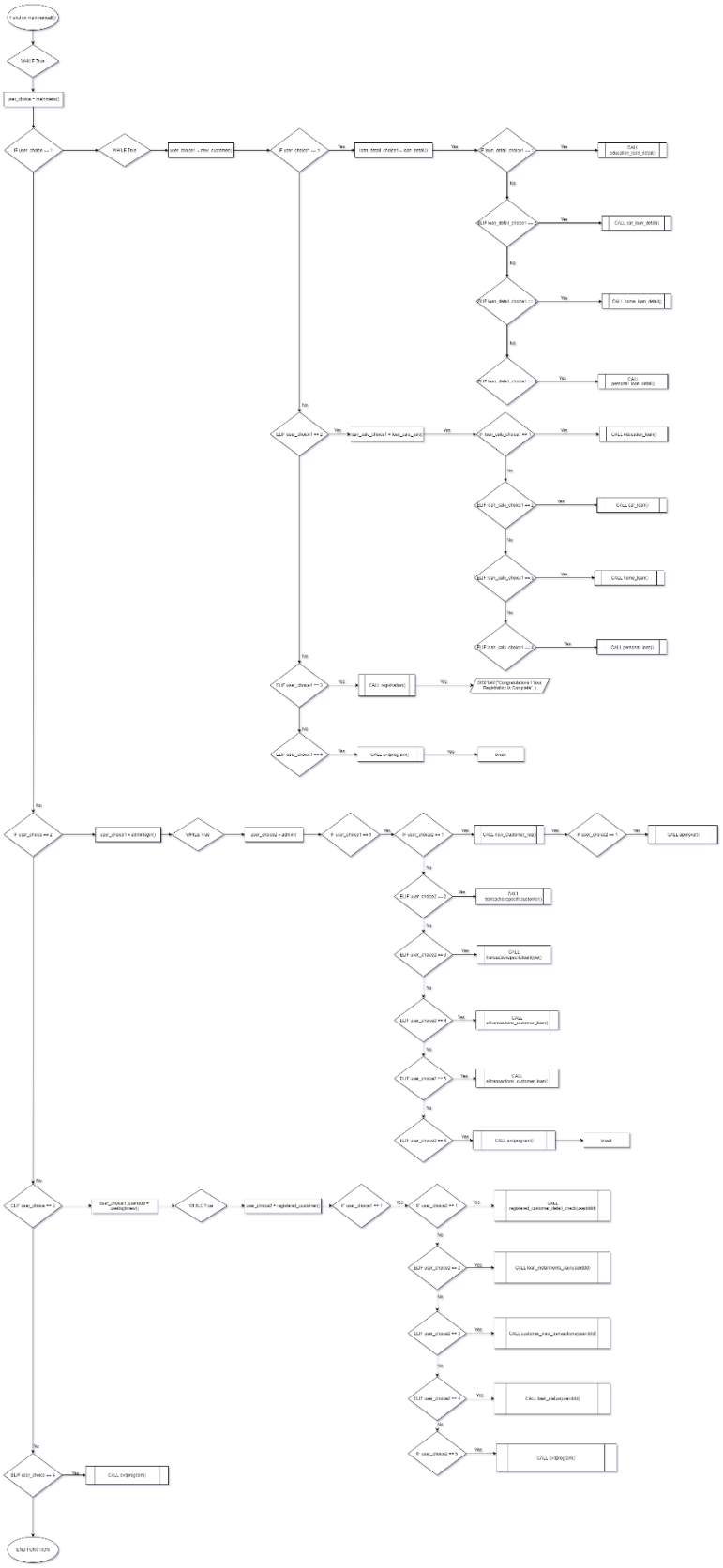
```
DEFINE FUNCTION loan_status(username1):
    WHILE TRUE:
        OPEN loan_status.txt as view_loan_status in READ MODE

        DECLARE detail_check as BOOLEAN
        detail_check = False
        FOR line in view_loan_status with readlines
            check = line.strip().split(",")
            IF username1 == check[0]
                DISPLAY(check)
                detail_check = True
                break
            ENDIF
        ENDFOR
        IF detail_check:
            break
        ELSE:
            DISPLAY("Incorrect Details")
        ENDIF
        CLOSE view_loan_status
    ENDWHILE
END FUNCTION
```


FUNCTION loan_status(username1)
WHILE True
OPEN loan_status.txt as view_loan_status in READ MODE
loan_status.txt
DECLARE detail_check as BOOLEAN
detail_check = False
FOR line in view_loan_status with readlines
check = line.strip().split(",")
IF username1 == check[0]
Yes
DISPLAY(check)
Yes
detail_check= True
Yes
break
No
IF detail_check:
Yes
break
No
ELSE
Yes
DISPLAY("Incorrect Details")
CLOSE view_loan_status
END FUNCTION

Function mainmenuall

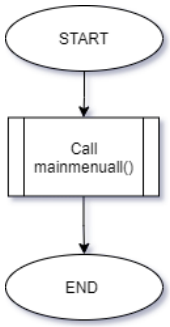
```
DEFINE Function mainmenuall():
    WHILE TRUE:
        user_choice = mainmenu()
        IF user_choice == 1:
            WHILE TRUE:
                user_choice1 = new_customer()
                IF user_choice1 == 1:
                    loan_detail_choice1 = loan_detail()
                    IF loan_detail_choice1 == 1:
                      CALL education_loan_detail()
                    ELIF loan_detail_choice1 == 2:
                      CALL car_loan_detail()
                    ELIF loan_detail_choice1 == 3:
                      CALL home_loan_detail()
                    ELIF loan_detail_choice1 == 4:
                      CALL personal_loan_detail()
                    ENDIF
                ELIF user_choice1 == 2:
                     loan_calu_choice1 = loan_calu_ask()
                     IF loan_calu_choice1 == 1:
                       CALL education_loan()
                     ELIF loan_calu_choice1 == 2:
                       CALL car_loan()
                     ELIF loan_calu_choice1 == 3:
                       CALL home_loan()
                     ELIF loan_calu_choice1 == 4:
                       CALL personal_loan()
                     ENDIF
                ELIF user_choice1 == 3:
                     CALL registration()
                     DISPLAY("Congratulations ! Your Registration is Complete", )
                ELIF user_choice1 == 4:
                     CALL exitprogram()
                     break
                ENDIF
            END WHILE

```

```
        IF user_choice == 2:
            user_choice1 = adminlogin()
            WHILE TRUE:
                user_choice2 = admin()
                    IF user_choice1 == 1:
                        IF user_choice2 == 1:
                         CALL new_Customer_req()
                            IF user_choice2 == 1:
                               CALL approval()
                            ENDIF
                        ELIF user_choice2 == 2:
                          CALL transactionspecificcustomer()
                        ELIF user_choice2 == 3:
                          CALL transactionspecificloantype()
                        ELIF user_choice2 == 4:
                          CALL alltransactions_customer_loan()
                        ELIF user_choice2 == 5:
                          CALL alltransactions_customer_loan()
                        ELIF user_choice2 == 6:
                         CALL exitprogram()
                         break
                        ENDIF
                    ENDIF
            END WHILE

        IF user_choice == 3:
            user_choice1, useriddd = userloginnew()
            WHILE TRUE:
                user_choice2 = registered_customer()
                IF user_choice1 == 1:
                    IF user_choice2 == 1:
                     CALL registered_customer_detail_check(useriddd)
                    ELIF user_choice2 == 2:
                     CALL loan_installments_pay(useriddd)
                    ELIF user_choice2 == 3:
                     CALL customer_view_transactions(useriddd)
                    ELIF user_choice2 == 4:
                     CALL loan_status(useriddd)
                    ELIF user_choice2 == 5:
                    CALL exitprogram()
                    break
                    ENDIF
            ENDIF
        ENDIF
        IF user_choice == 4:
            CALL exitprogram()
            END WHILE
    END WHILE
    END FUNCTION
```



Call mainmenuall

```
Call mainmenuall()
```



Program source code and explanation

Variable: In python a variable is like a reserve memory which store values. It has no command to declare a variable. In python it declares the variable automatically when the user assigns the value. Given below is the example of the variable where it was declared as customer_register which is asking the user the input.

```
# (3) Registered Customer
def registered_customer():
    print("\nCheck Loan Detail, press 1")
    print("Can pay loan installment, press 2")
    print("Can view the own transactions, press 3")
    print("Can check the status of Loan, press 4")
    print("Exit, press 5 ")
    try:
        customer_register = int(input("Enter a choice: "))
    except ValueError:
        customer_register = 0
    return customer_register
```

Function: A function is a group of statements that are used to do a specific program. It is also like a piece of code that only runs when you called it. Given below is the example where Function has been defined and all the code is there.

```
def adminlogin():
    while True:
        username = input("Enter your username (Must be all capital letters) : ")
        pw = input("Enter the password: ")
        admincheck = False
        for line in open("admin.txt", "r").readlines():
            login_check = line.strip().split()
            if username == login_check[0] and pw == login_check[1]:
                if username.isupper():
                    print("Welcome Admin")
                    admincheck = True
                    break
        if admincheck:
            break
        else:
            print("Incorrect Details")
    return 1
```

In the picture below you can see function which was made before has been recalled.

```
# Admin Menu
    if user_choice == 2:
        user_choice1 = adminlogin()
        while True:
            user_choice2 = admin()
            if user_choice1 == 1:
                if user_choice2 == 1:
                    new_Customer_req()
                    if user_choice2 == 1:
                        approval()
                elif user_choice2 == 2:
                    transactionspecificcustomer()
                elif user_choice2 == 3:
                    transactionspecificloantype()
                elif user_choice2 == 4:
                    alltransactions_customer_loan()
                elif user_choice2 == 5:
                    alltransactions_customer_loan()
                elif user_choice2 == 6:
                    exitprogram()
                    break
```

Control Structure: There are three statements in control structure. IF, ELSE & ELIF.

Below is the example of IF and ELSE statements as you can see amount taken is greater than 10000 and less than that 5000000 so if the user input the value less than 10000 and greater than 5000000 the else statements will take place and will show the message “The input is incorrect ”.

```
def education_loan():
    interest = 5.50
    no_of_year = 0

    while True:
            try:
                amount_taken = int(input("Enter the Amount taken as a loan: "))

            except ValueError:
                amount_taken = 0
                # return amount_taken
            if amount_taken >= 10000 and amount_taken < 5000000:
                pass
            else:
                print("The input is incorrect")
                continue

            try:
                no_of_year = int(input("Enter number of years to repay : "))
            except ValueError:
                no_of_year = 0
                # return no_of_year
            if no_of_year in range(5, 20):
                break
            else:
                print("The input is incorrect")
                continue
```

Loops

For Loop: A for loop basically allows a specific set of conditions to be performed repeatedly until the condition is satisfied. Below is the example of for loop where it allows to through all the lines and check the specific name.

```
def customer_view_transactions(username1):
    while True:
        view_transactions = open("customer_transactions.txt", "r")

        detail_check = False
        for line in view_transactions.readlines():
            check = line.strip().split()
            if username1 == check[0]:
                print(check)
                detail_check = True
                break
        if detail_check:
            break
        else:
            print("Incorrect Details")

        view_transactions.close()
```

Files: It is some information or data which stays on the computer machine.

Reading file: Below is the example where a variable is declared, and file is open and it is using a ‘r’ which means it is only reading the file and printing out the information.

```
def alltransactions_customer_loan():
    custo_loan_trans_all = open("customer_transactions.txt", "r")
    checking = custo_loan_trans_all.read()
    print("\n" + checking )
    custo_loan_trans_all.close()
```

Appending File: Append is something which new information can be added but previous cannot be removed So below you can see the example of appending the file where it is writing data by asking the user input and then it is printing the specific data.

```
def registration():
    reg_file = open("Registration.txt", "a")

# Asking Details for registration
    fname = input("Enter your First Name: ").upper()
    lname = input("Enter your Last Name: ").upper()
    address = input("Enter the Address: ")
    email = input("Enter your Email ID: ")
    contact_no = input("Enter the Contact Number: ")
    gender = input("Enter your Gender: ").upper()
    date_of_birth = input("Enter your Date of Birth in format 'yy-mm-dd' : ")
    loan_type = input("Enter the Loan Type: ").upper()
    loan_terms = input_("Enter the Loan Years: ").upper()
    installment_amount = input("Enter the Installment Amount: ").upper()
    user_id = input("Enter your User ID: ").upper()
    pw = input("Enter password: ")
    reconfirm_pw = input("Rewrite the password for confirmation: ")

# Writing the details for registration
    reg_file.write(fname + " ")
    reg_file.write(lname + ",")
    reg_file.write(address + ",")
    reg_file.write(email + ",")
    reg_file.write(contact_no + ",")
    reg_file.write(gender + ",")
    reg_file.write(date_of_birth + ",")
    reg_file.write(loan_type + ",")
    reg_file.write(loan_terms + ",")
    reg_file.write(installment_amount + ",")
```

```
    reg_file.write(user_id + ",")
    reg_file.write(pw + ",")
    reg_file.write(reconfirm_pw_)
    reg_file.write("\n")
    reg_file.close()
# Showing the details
    print(fname, lname)
    print(address)
    print(email)
    print(contact_no)
    print(gender)
    print(date_of_birth)
    print(loan_type + "LOAN")
    print(loan_terms + "YEARS")
    print(installment_amount + " RM ")
```

Input/Output

Main Menu

In the Main menu If the user press 1. It will show the New Customer menu

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 1

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

Main Menu(Incorrect Value)

If the user input a. It will show the same main menu again and will ask for input

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: a

Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: |
```

New Customer Menu (IF PRESS 1)

In the new customer if the user presses 1 it will show the type of loans.

```
To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: 1

Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice:
```

New Customer Menu(Incorrect Value)

If the user input a. It will show the new customer menu again and will ask for input

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 1

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: a

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

Loan Detail Menu

In Loan Details menu if the user presses 1 It will education loan show details and will show new customer menu. User can exit by pressing 4.

```
Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice: 1
Loan Eligibility: Malaysian Citizen
Full-time students age between 18-25 years old
Part-time students age between 18-35 years old
Loan Amount : Minimum 10000 RM, Maximum 5000000 RM
Interest Rate: 3.5%
Number of Year: 3-10

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user presses 2 It will show car loan details and will show new customer menu. User can exit by pressing 4.

```
Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice: 2
Loan Eligibility: Malaysian Citizen
Minimum age between 21 to 30 years old
Minimum Income: 10000 RM
Loan Amount : Minimum 9999 RM, Maximum 4000000 RM
Interest Rate: 3.4%
Number of Year: 1-9

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user presses 3. It will show home loan details will show new customer menu. User can exit by pressing 4.

```
Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice: 3
Loan Eligibility: Malaysian Citizen
Minimum age between 21 to 70 years old
Minimum Income: 30000 RM
Loan Amount : Minimum 100000 RM, Maximum 349999 RM
Interest Rate: 4.55%
Number of Year: 5-35

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user presses 4. It will show personal loan details will show new customer menu. User can exit by pressing 4.

```
Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice: 4
Loan Eligibility: Malaysian Citizen,Self-Employed
Minimum age between 21 to 58 years old
Minimum Income: 24000 RM
Loan Amount : Minimum 2000 RM, Maximum 100000 RM
Interest Rate: 6.88%
Number of Year: 2-5

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

Loan Detail Menu(Incorrect Value)

If the user input b. It will show the new customer menu.

```
Which type of loan detail you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan, press 3
For Personal Loan, press 4
Enter a choice: b

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: |
```

New Customer Menu (IF PRESS 2)

If the user presses 2 It will show the loan calculator menu

```
To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: 2

Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: |
```

New Customer Menu (Incorrect Value)

If the user presses a. It will move back to the new customer menu.

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: a

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: |
```

Loan Calculator Menu

If the use press 1 and put correct input. It will show loan payment for education loan

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: 1
Enter the Amount taken as a loan: 15000
Enter number of years to repay : 10
Total Amount is 23250.00 RM
Monthly Repayment is 193.75 RM

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user press 2 and put correct input. It will show loan payment for car loan

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: 2
Enter the Amount taken as a loan: 12000
Enter the Down Payment : 2000
Enter number of years to repay : 7
Total Amount is 12380.00 RM
Monthly Repayment is 147.38 RM

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user press 3 and put correct input. It will show loan payment for home loan

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: 3
Enter the Amount taken as a loan: 200000
Enter number of years to repay : 15
Total Amount is 336500.00 RM
Monthly Repayment is 1869.44 RM

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

If the user press 4 and put correct input. It will show loan payment for personal loan

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: 4
Enter the Amount taken as a loan: 6000
Enter number of years to repay : 3
Total Amount is 7238.40 RM
Monthly Repayment is 201.07 RM

To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice:
```

Loan Calculator Menu (Incorrect Value)

If user presses on any of the loan calculator and put incorrect amount/down/payment/year. It will ask the amount again until user put correct value.

```
Which type of loan calculator you want to see
For Education Loan, press 1
For Car Loan, press 2
For Home Loan press 3
For Personal Loan press 4
Enter a choice: 4
Enter the Amount taken as a loan: 5000
Enter number of years to repay : 7
The input is incorrect
Enter the Amount taken as a loan:
```

New Customer Menu (IF PRESS 3)

When the user press 3 it will goes into registration menu where it will ask the details to the customer who want to register

```
To Check Loan Detail, press 1
To Use Loan Calculator to check Loan Amount, press 2
Do Registration, press 3
Exit, press 4
Enter a choice: 3
Enter your First Name: Abdul
Enter your Last Name: Ahad
Enter the Address: Parkhill Residence
Enter your Email ID: ahadsuperboy@gmail.com
Enter the Contact Number: 0146974028
Enter your Gender: Male
Enter your Date of Birth in format 'yy-mm-dd' : 2000-07-01
Enter the Loan Type: Education
Enter the Loan Years: 7
Enter the Installment Amount: 20000
Enter your User ID: Ahad1234
Enter password: Apu
Rewrite the password for confirmation: Apu
ABDUL  AHAD
Parkhill Residence
ahadsuperboy@gmail.com
0146974028
MALE
2000-07-01
EDUCATIONLOAN
7YEARS
20000 RM
Congratulations ! Your Registration is Complete
```

Admin Login Menu

When user presses 2 It will ask login details and after putting correct details It will proceed to the Admin Menu

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 2
Enter your username (Must be all capital letters) : SAM50
Enter the password: 60400
Welcome Admin

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Login Menu(Incorrect Value)

If the admin put incorrect value it will ask to put login details again unless the admin put correct value.

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 2
Enter your username (Must be all capital letters) : Sam23443
Enter the password: d2eads
Incorrect Details
Enter your username (Must be all capital letters) : |
```

Admin Menu(IF Presses 1)

When the admin presses 1 it shows the customer who have applied for registration. It will ask if want to approve or disapprove.

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 2
Enter your username (Must be all capital letters) : SAM50
Enter the password: 60400
Welcome Admin

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 1
The Customers who have applied for registration with their details are :
UMAR ALI,Pavilion Residence,umarali20210@gmail.com,0104658224,MALE,06/10/1980,Student,Education LOAN,10 Years,15000,UMAR20210,penangbeach,penangbeach
MOHAMMAD ALI,The Park Sky Residence,alimohammad3205@gmail.com,0132244234,MALE,05/04/1980,CAR LOAN,6 YEARS,20000,ALIMOHAMMAD3205,Malaysiaisgreat,Malaysiaisgreat
ARVIND,The Fortune Park,arvindapu@gmail.com,0144523213,MALE,2003-05-06,HOME,15 Years,250000,ARVD07,Klbest,Klbest
ABDUL AHAD,Parkhill Residence,ahadsuperboy@gmail.com,0146974028,MALE,2000-07-01,EDUCATION,7,20000,AHAD1234,Apu,Apu


If you want to use Approve OR Disapprove Requests one by one enter the button, press 1
Enter a choice:
```

And again if presses 1 it will ask type of loan

```
If you want to use Approve OR Disapprove Requests one by one enter the button, press 1
Enter a choice: 1
UMAR ALI,Pavilion Residence,umarali20210@gmail.com,0104658224,MALE,06/10/1980,Student,Education LOAN,10 Years,15000,UMAR20210,penangbeach,penangbeach

To Approve and Provide Education Loan Installment, Press 1
To Approve and Provide Car Loan Installment, Press 2
To Approve and Provide Home Loan Installment, Press 3
To Approve and Provide Personal Loan Installment, Press 4
To Disapprove Press 5
To Skip Press 6
Enter your decision:
```

After pressing the loan, it will ask about amount taken and number of years. When calculation is done request is approved. After that It will ask about customer who have applied for registration.

```
If you want to use Approve OR Disapprove Requests one by one enter the button, press 1
Enter a choice: 1
UMAR ALI,Pavilion Residence,umarali20210@gmail.com,0104658224,MALE,06/10/1980,Student,Education LOAN,10 Years,15000,UMAR20210,penangbeach,penangbeach

To Approve and Provide Education Loan Installment, Press 1
To Approve and Provide Car Loan Installment, Press 2
To Approve and Provide Home Loan Installment, Press 3
To Approve and Provide Personal Loan Installment, Press 4
To Disapprove Press 5
To Skip Press 6
Enter your decision: 1
Enter the Amount taken as a loan: 15000
Enter number of years to repay : 10
Total Amount is 23250.00 RM
Monthly Repayment is 193.75 RM
MOHAMMAD ALI,The Park Sky Residence,alimohammad3205@gmail.com,0132244234,MALE,05/04/1980,CAR LOAN,6 YEARS,20000,ALIMOHAMMAD3205,Malaysiaisgreat,Malaysiaisgreat

To Approve and Provide Education Loan Installment, Press 1
To Approve and Provide Car Loan Installment, Press 2
To Approve and Provide Home Loan Installment, Press 3
To Approve and Provide Personal Loan Installment, Press 4
To Disapprove Press 5
To Skip Press 6
Enter your decision: |
```

Admin Menu Approving (Incorrect)

If the user put z as an input. It will go back to the admin menu and will ask input.

```
If you want to use Approve OR Disapprove Requests one by one enter the button, press 1
Enter a choice: 1
UMAR ALI,Pavilion Residence,umarali20210@gmail.com,0104658224,MALE,06/10/1980,Student,Education LOAN,10 Years,15000,UMAR20210,penangbeach,penangbeach

To Approve and Provide Education Loan Installment, Press 1
To Approve and Provide Car Loan Installment, Press 2
To Approve and Provide Home Loan Installment, Press 3
To Approve and Provide Personal Loan Installment, Press 4
To Disapprove Press 5
To Skip Press 6
Enter your decision: z

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(IF Presses 2)

When the user presses 2 it will ask load id after putting correct Id it will show the transactions of the specific customer.

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 2
Enter the Customer ID: ARVD07
ARVD07 72189874 Home 2336.80RM Paid 2021-07-28

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(Incorrect)

So, if the admin puts the wrong id it won't show the transactions instead it will go back to admin menu.

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 2
Enter the Customer ID: ADH2334

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(IF Presses 3)

When the user presses 3 it will ask loan type after putting the loan type it will show the transactions of the specific loan type

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 3
Enter the Loan Type(First Word Capital): Car
ALI3205 63235739 Car 301.0RM Paid 2021-11-25


Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(Incorrect)

So if the admin puts the put g it will go back to admin menu.

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 3
Enter the Loan Type(First Word Capital): g

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(IF Presses 4)

If admin presses 4 it will show the transactions of all customer

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 4

UMAR20210 80811728 Education 193.75RM Paid 2021-08-22
ALI3205 63235739 Car 301.0RM Paid 2021-11-25
ARVD07 72189874 Home 2336.80RM Paid 2021-07-28


Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(IF Presses 5)

If admin presses 4 it will show the transactions of all type of loan

```
Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: 5

UMAR20210 80811728 Education 193.75RM Paid 2021-08-22
ALI3205 63235739 Car 301.0RM Paid 2021-11-25
ARVD07 72189874 Home 2336.80RM Paid 2021-07-28


Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice:
```

Admin Menu(Incorrect Value)

If the admin presses z. It will show the admin menu again.

```
Enter your username (Must be all capital letters) : SAMSO
Enter the password: 60400
Welcome Admin

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: Z

Show the New Customer's Request, Give Approval,Unique Loan ID/Installment Date/Installment Amount press 1
Show Transaction of Specific Customer, press 2
Show Transaction of Specific Loan type , press 3
Show Transaction of All Customer, press 4
Show Transaction of All Types Loan, press 5
Exit, press 6
Enter a choice: |
```

Registration Customer Login

When user presses 3 It will ask login details and after putting correct details It will proceed to the Registered Customer Menu

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 3
Enter your username (Must be all capital letters) : ARVD07
Enter the password (First Alphabet Capital) : Klbest
Welcome User

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice:
```

Registration Customer Login Menu (Incorrect Value)

If the user put incorrect value it will ask to put login details again unless the user put correct value.

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 3
Enter your username (Must be all capital letters) : arvdsffs
Enter the password (First Alphabet Capital) : 12432
Incorrect Details
Enter your username (Must be all capital letters) : |
```

Registered Customer Menu (IF Presses 1)

If the user presses 1 it will show the pay loan installments details. After that it show the registered customer menu. User can login by pressing 5.

```
Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: 1
['ARVIND', ' TheFortunePark', ' arvindapu@gmail.com', ' 0144523213', ' MALE', ' 2003-05-06', ' HOME LOAN', '15 Years', ' 250000', 'ARVD07', ' Klbest', ' Klbest', ' 72189874', ' 202

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice:
```

Registered Customer Menu (IF Presses 2)

If the user presses 2 it will ask about details after putting correct details it will approve the payment

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 3
Enter your username (Must be all capital letters) : ARVD07
Enter the password (First Alphabet Capital) : Klbest
Welcome User

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: 2
Enter your 8 Digit Loan ID: 72189874
Enter the Loan Type: Home
Enter the Amount to pay: 2336
Enter the Installment date: yy-mm-dd: 2021-07-28
Loan ID Exist
```

Registered Customer Menu (IF Presses 2 INCORRECT Value)

If the user put 2 and put wrong loan details. It will show it is incorrect and will go back to registered customer menu.

```
Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: 2
Enter your 8 Digit Loan ID: 12346234
Enter the Loan Type: Home
Enter the Amount to pay: 21324
Enter the Installment date: yy-mm-dd: 2021-04-02
Incorrect Details

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice:
```

Registered Customer Menu (IF Presses 3)

If the user presses 3 it will show the own transactions of the customer

```
Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: 3
['ARVD07', '72189874', 'Home', '2336.80RM', 'Paid', '2021-07-28']

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice:
```

Registered Customer Menu (IF Presses 4)

If the user presses 4 it will show the status of the customer.

```
Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: 4
['ARVD07', ' LoanType:Home', ' Paid Amount:2336.80RM', ' Total Installment:420625.0RM', ' Remaining:418288.2RM', ' Loan Length:15 Years']

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice:
```

Registered Customer Menu (Incorrect Value)

If the user put ‘a’ it will ask the input again

```
Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: a

Check Loan Detail, press 1
Can pay loan installment, press 2
Can view the own transactions, press 3
Can check the status of Loan, press 4
Exit, press 5
Enter a choice: |
```

Exit Menu

If the user press 4 it will exit the program

```
Welcome to the Malaysia Bank Online Loan Management System
For New Customer, press 1
For Admin, press 2
For Registered Customer, press 3
To Exit, press 4
Enter a choice: 4
Thank you Bye
```

Conclusion

This module is a great module to learn about programming. It has me helped a lot to learn about the basics of python which includes things like function, loops, files, variables, text files and strings etc. This module has also helped me a lot to structure the program. The assignment has help me to learn about different kind of loan and how a bank loan system works. It also helped to learn about interest rates. This module will definitely help me a lot in the near future.

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