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#!/bin/bash

#Assign the DB path into a variable
#FILE=/etc/phonebook
FILE=/etc/phonebookDB.txt

args=$#
arg_option=$1
arg_name=$2
args_list=($@)

#functions implementations

#function display the DB content
function display_data(){

    echo "Phonebook Data base content"
    echo ""
    cat $FILE

}

#function to delete the DB file
function delete_all(){
if [ -s $FILE ]
then
#delete data in database
cat /dev/null > $FILE

echo "The DB is now empty"

else
echo "the file already empty"
fi
}

#function for check on name regex
function name_check()
{
    name_re=^[A-Za-z]+$

    if [[ ! $1 =~ $name_re ]];
    then
        clear
        echo "error : "
        echo "usage [name]"
        echo "ex : bash phonebook -i LinuUser 01xxxxxxxxxx"
        echo "note : you can add multiple phone number splitting them with spaces"
        echo "ex : bash phonebook -i LinuUser 01xxxxxxxxxx 01xxxxxxxxxx ...."
        return 1
    else
        return 0
    fi
}

#function for check on name regex

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function phonenumber_check(){
counter=0
ph_re=01[0-9]{9}
#check if phonenumber added later
if [[ $1 =~ $ph_re ]]
then
    return 0
fi

#check if phonenumber added on time
for (( i=2; i<$args; i++ ))
do
    if [[ ${args_list[$i]} =~ $ph_re ]];
    then

        ((counter=$counter+1))
    fi
done

((check=$args-2))

if [ $counter -eq $check ]
then
    return 0
fi

return 1

}

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#function write into database
function DB_write()
{

    echo -n "$arg_name ," >> $FILE

for (( j=2; j<${args}; j++ ))
do
    # echo ${arg_list[$i]} >> $FILE
    echo -n "${args_list[$j]} " >> $FILE
done

    echo " " >> $FILE
    echo "Data added successfully"

return 0

}

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#function to search for specific name in DB
function search_by_name
{

    if grep -w -q $1 $FILE ;

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        then
            return 0
        else
            return 1
        fi
    }

#function to delete a specific name and its data
function delete()
{
#check=grep -w $arg_name $FILE

    sed -i -E "/^$1 ,/d" $FILE
}

#function to take name and phone number from user
function insert (){
echo " "
echo "insert option has been selected"
read -p "Enter contact's name : " name
read -p "Enter contact's number " phone_number

#name_check func call to check on name regex then check its value
name_check $name
name_regex=$?

#phonenumber_check func call to check on phone regex then check its value
phonenumber_check $phone_number
phonenumber_regex=$?

if [ $name_regex -eq 0 ] && [ $phonenumber_regex -eq 0 ]
then

    search_by_name $name
    if [ $? -eq 0 ]
    then
        echo "sorry already exists"
    else
        echo -n "$name , " >> $FILE
        echo "$phone_number" >> $FILE
        echo " "
        echo "Data added successfully"
    fi
else
    echo "error : "
    echo "error : unavailable pattern"
    echo "usage : bash phonebook [OPTION] PATTERN[NAME] or [NAME][PHONE NUMBER]"
    echo "ex : AhmedAli 01xxxxxxxxxx 01xxxxxxxxxx "

fi
}

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***** Main code implementation *****
*****#

#check if the DB exists in the required path or not
#if yes we access it , if no we create one
clear
if [ ! -f $FILE ]
then
    touch DB
fi

#check if any arguments is passed
if [ $args -ne 0 ]
then

#check on arguments passed

    #display the whole data base option
    if [ $arg_option == -v ]
    then
        clear
        #display all func call to display DB content
        display_data

    #delete the whole data base data
    elif [ $arg_option == -e ]
    then
        clear
        #delete all func call to delete all DB content
        delete_all

    #insert data in data base option
    elif [ $arg_option == -i ]
    then
        clear
        #check if there are another argument passed to script
        if [ $args -gt 2 ]
        then
            #name_check func call to check on name regex then check its value
            name_check $arg_name
            name_regex=$?

            #name_check func call to check on name regex then check its value
            phonenum_check
            phonenum_regx=$?

            #check on return and then write the value
            if [ $name_regex -eq 0 ] && [ $phonenum_regx -eq 0 ]
            then
                search_by_name $arg_name
                if [ $? -eq 0 ]
                then
                    echo "Name already exists , can't add it"
                else
                    DB_write
                fi
            fi
        fi
    fi
fi

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        else
            echo "error : with input arguments "
            echo "name should be only letters from aA to zZ and phone number
s only digits 0-9"
            echo "ex : AhmedAli 01xxxxxxxxx 01xxxxxxxxx "
        fi
    else
        echo "error : unavailable pattern"
        echo "usage : bash phonebook [OPTION] PATTERN[NAME] or [NAME][PHONE N
UMBER]"
        echo "ex : AhmedAli 01xxxxxxxxx 01xxxxxxxxx "
        echo "but we got your back xD"
        insert
    fi

#delete a specific data option
elif [ $arg_option == -d ]
then
    #check on the presence of argument you want to delete
    if [ $args -gt 1 ]
    then
        search_by_name $arg_name
        if [ $? -eq 0 ]
        then

            delete $arg_name
            echo "Name and its data has been deleted"

        else
            echo "The name you want to delete doesnt exists"
        fi
    else

        echo "error : missing in options"
        echo "bash phonebook [options]"
        echo " "
        echo "-i insert name and phone numbers"
        echo "-v print all contacts"
        echo "-s search by contact name"
        echo "-e delete all records"
        echo "-d delete one contact name"
    fi

#search for data option
elif [ $arg_option == -s ]
then
    #check on the presence of argument you want to delete
    if [ $args -gt 1 ]
    then
        search_by_name $arg_name
        if [ $? -eq 0 ]
        then

            echo "the data you search for"
            grep -w $arg_name $FILE ;

        else
            echo "The name you search for doesnt exists"
        fi
    fi

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else
    echo "error : missing in options"
    echo "bash phonebook [options]"
    echo " "
    echo "-i insert name and phone numbers"
    echo "-v print all contacts"
    echo "-s search by contact name"
    echo "-e delete all records"
    echo "-d delete one contact name"
fi

else
    clear
    echo "error : unavailable options"
    echo "usage : bash phonebook [OPTION] PATTERN[NAME] | [NAME][PHONE NUMBER]"
    "
    echo "provided options"
    echo "-i insert name and phone numbers"
    echo "-v print all contacts"
    echo "-s search by contact name"
    echo "-e delete all records"
    echo "-d delete one contact name"
fi

else
    clear
    echo "error : missing in options"
    echo "bash phonebook [options]"
    echo " "
    echo "-i insert name and phone numbers"
    echo "-v print all contacts"
    echo "-s search by contact name"
    echo "-e delete all records"
    echo "-d delete one contact name"

fi

exit 0
#####
#####

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