

INSERT accounts

VALUES (typeInput, usernameInput,

Returns TRUE if account is successfully created.

passwordInput, emailInput,

14. Return TRUE to the Service if the account was successfully created15. Return TRUE to the Manager if the request was successfully performed

16. Return TRUE to System and follow with the appropriate Logging for this operation

FAILURE CASE DIAGRAMS

Fail Case 13

New Account is not Inserted into MariaDB

Reasons:

- incorrect DML syntax

- MariaDB fails either by connection timeout or external factors

CreateA (Applic			teAccountService Crea Service Layer)	ateAccountDataAccess (Data Access Layer) ;	MariaDB (Data Store)
perationRequest(CREATE : enum) : Boolean	createAccountManager = new CreateAccountManager()	CreateAccountManager()			
	return CreateAccountManager				
	createAccountManager.CreateAccountInput(accountInfo : Map <string, string="">) : Boolean</string,>	IsValidRequest(request : String[]) : Boolean			
		createAccountService = new CreateAccountService()	CreateAccountService()		
		return CreateAccountService			
		createAccountService.CreateAccountRequest(accountInfo : Map <string, string="">) : Boolea</string,>	createAccountDataAccess = new CreateAccountDataAccess()	CreateAccountDataAccess()	
			return CreateAccountDataAccess		
			createAccountDataAccess.IsAccountActive(username : String) : Boolean	EstablishMariaDBConnection(): Boolean	Q Si
				SelectAccount(searchAccountDML : String) : Boolean	FI W
				False : Boolean	
			False : Boolean		
			createAccountDataAccess.CreateAccount(accountInfo : Map <string, string="">) : Boole</string,>	InsertAccount(createAccountDML : String) : Boolean	IN V
			False : Boolean	False : Boolean	
Edw. Bod	False : Boolean (Subsequent Logging Process Here)	False : Boolean			
False : Boolean (Subsequent Logging Process Here)	K	- 			i i

Fail Case 10a

New Account already exists in MariaDB

Reasons:
- account already exists

Create <i>A</i> (Applic		ccountManager ness Layer)	CreateAccountService (Service Layer)	CreateAccountDataAccess (Data Access Layer)	MariaDB (Data Store)
OperationRequest(CREATE : enum) : Boolean	createAccountManager = new CreateAccountManager()	CreateAccountManager()			
	return CreateAccountManager <				
	createAccountManager.CreateAccountInput(accountInfo : Map <string, string="">) : Boolean</string,>	► IsValidRequest(request : String[]) : Boolean			
		4			
		createAccountService = new CreateAccountService()	CreateAccountService()		
		return CreateAccountService createAccountService.CreateAccountRequest(accountInfo : Map <string, string:<="" td=""><td>>) : Boolean</td><td></td><td></td></string,>	>) : Boolean		
				new CreateAccountDataAccess() CreateAccountDataAccess()	
			return CreateAccou	untDataAccess	
			createAccountDataAccess.lsAcc	countActive(username : String) : Boolean EstablishMariaDBConnection() : Boolean	n Que SEL
					FRC WH
				SelectAccount(search.	AccountDML : String) : Boolean
			True : Boo	olean Tru	ue : Boolean
Edus Bullion	False : Boolean (Subsequent Logging Process Here)	False : Boolean	<u>-</u>		
False : Boolean (Subsequent Logging Process Here)					

Fail Case 10b
Could Not Process Query
Reasons:
- incorrect DML syntax
- MariaDB fails either by connection timeout or external factors

CreateAcco (Application	untEntry CreateAcc n Layer) (Busine	countManager ess Layer)	CreateAccountService (Service Layer)	CreateAccountDataAccess (Data Access Layer)	MariaDB (Data Store)
SingleOperationRequest(CREATE : enum) : Boolean	createAccountManager = new CreateAccountManager()	CreateAccountManager()			
	return CreateAccountManager				
	createAccountManager.CreateAccountInput(accountInfo : Map <string, string="">) : Boolean</string,>	IsValidRequest(request : String[]) : Boolean			
		createAccountService = new CreateAccountService()	CreateAccountService()		
		return CreateAccountService			
		createAccountService.CreateAccountRequest(accountInfo : Map <string, string="">) : Bo</string,>	createAccountDataAccess = new CreateAc	ccountDataAccess() CreateAccountDataAccess()	
			return CreateAccountDataAcces	ss	
			createAccountDataAccess.IsAccountActive(u	EstablishMariaDBConnection(): Boolean	Query Processing: SELECT username
				SelectAccount(searchAc	FROM accounts WHERE username LIKE usernameInput
			Error : String	₭	or : String
	False : Boolean (Subsequent Logging Process Here)	False : Boolean	1	NOTE: True is the fail sa	afe default so a
False : Boolean (Subsequent Logging Process Here) 	(Subsequent Logging Process Here)		NOTE: True is the fail safe default so a malicious user does not exploit the Fals also we can't represent a database erro binary result	se value also we can't represent a	exploit the False value a database error in a
] 	

Fail Case 9
MariaDB Connection could not be Established
Reasons:
- EstablishMariaDBConnection() returns False
-- NOTE: continue to call this method until True
if still no connection after 5 seconds, log the error and end the process

	CreateAccountEntry Creat (Application Layer) (B	reAccountManager Create (Seiness Layer)	eAccountService (ervice Layer)	CreateAccountDataAccess (Data Access Layer)	MariaDB (Data Store)
SingleOperationRequest(CREATE : enum) : Boole	createAccountManager = new CreateAccountManager()	CreateAccountManager()			
	return CreateAccountManager createAccountManager.CreateAccountInput(accountInfo : Map <string, string="">) : Boole</string,>				
		createAccountService = new CreateAccountService() return CreateAccountService createAccountService.CreateAccountRequest(accountInfo : Map <string, string="">) : Boolean</string,>	createAccountDataAccess = new CreateAccountDataAccess return CreateAccountDataAccess createAccountDataAccess.lsAccountActive(username : String)		
False : Boolean (Subsequent Logging Process Here) <	False : Boolean (Subsequent Logging Process Here)	False : Boolean	False : Boolean (Appropriate Logging Process Here)		

Fail Case 4
Invalid Request
Reasons:
- Inputs do not follow their respective regex
- Missing required input(s) or does not match the inputs required for request

	- Missing required input(s) or does not match the inputs required for request						
	CreateAccountEntry (Application Layer)	CreateAccountManager (Business Layer)	CreateAccountService (Service Layer)	CreateAccountDataAccess (Data Access Layer)	MariaDB (Data Store)		
SingleOperationRequest(CREATE : enum) : E	Soolean	ager()					
	return CreateAccountManager	CreateAccountManager()					
	createAccountManager.CreateAccountInput(accountInfo : Map <stri< td=""><td>ing, String>) : Boolean</td><td></td><td></td><td></td></stri<>	ing, String>) : Boolean					
False : Boolean	False : Boolean (Subsequent Logging Process Here)	IsValidRequest(request : String[]) : Boolean					
(Subsequent Logging Process Here	<u>;) </u>	-					