Credit Card System API

API Implementation Details

CREATE ACCOUNT API

localhost:8080/api/accounts/create

POST

Request Payload:

```
Example 1:
  "customer": {
   "name": "Test user",
   "email": "user@test.com"
  "cardNumber": 80175553490965,
  "cardActive": false,
  "accountSummary": {
   "totalLimit": 2000,
   "balance": 120,
   "currency": "GBP",
   "balanceType":"Credit"
 }
}
Example 2:
 "customer": {
   "name": "Test user"
 },
 "cardNumber": 80175553490965,
 "accountSummary": {
     "totalLimit":1000
 }
}
```

Success Response:

```
{
    "id": 7,
    "cardNumber": "80175553490965",
    "cardActive": false,
    "customer": {
        "id": 7,
        "name": "Test user",
        "email": "user@test.com"
```

```
},
    "accountSummary": {
        "totalLimit": 2000,
        "balance": 120,
        "currency": "GBP",
        "balanceType": "Credit",
        "id": 7
   }
}
Error Response:
Example 1:
    "errorCode": "ERR 1005",
    "description": "INVALID_CREDIT_CARD_NUMBER",
    "httpStatus": "BAD_REQUEST",
   "timeStamp": "2021-06-17T19:28:29.7333388+01:00"
}
Example 2:
    "errorCode": "ERR_1007",
    "description": "INVALID REQUEST PARAM",
    "httpStatus": "BAD REQUEST",
    "timeStamp": "2021-06-17T19:28:50.5659178+01:00"
}
GET ACCOUNTS API
localhost:8080/api/accounts/
GET
Response:
[
        "id": 1,
        "cardNumber": "2191712435",
        "cardActive": false,
        "customer": {
            "id": 1,
            "name": "Test user 1",
            "email": "user@test.com"
        "accountSummary": {
            "totalLimit": 2000.00,
```

"balance": 120.00,

```
"currency": "£",
            "balanceType": "Credit",
            "id": 1
        }
    },
        "id": 2,
        "cardNumber": "80175553490965",
        "cardActive": false,
        "customer": {
            "id": 2,
            "name": "Test user 2",
            "email": "user2@test.com"
        },
        "accountSummary": {
            "totalLimit": 1000.00,
            "balance": 10.00,
            "currency": "£",
            "balanceType": "Debit",
            "id": 2
        }
    }
]
```

Unauthorized Endpoint:



Database & Schema Details

All tables:

Customers:

mysql> desc customers;				
Field Type	Null	Key	Default	Extra
id bigint email varchar(255) name varchar(50)			NULL NULL NULL	auto_increment

Accounts:

+ Field	Туре	 Null	Key	Default	Extra
id card_active card_number customer_id	varchar(255)	YES	PRI MUL	NULL 0 NULL NULL	

Account Summary:

+ Field	Туре	Null	Key	+ Default	Extra
account_id balance balance_type currency total_limit	bigint decimal(19,2) varchar(255) varchar(255) decimal(19,2)	NO YES YES YES YES	PRI	NULL NULL NULL NULL	

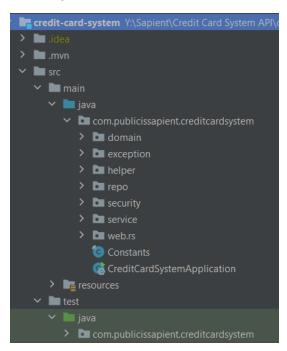
Sample Data:

```
mysql> select * from customers;
 id | email
                    name
  1 | user@test.com | Test user 1 |
 2 | user2@test.com | Test user 2 |
2 rows in set (0.00 sec)
mysql> select * from account;
 1 | 0 | aX9BuKuWbrtTn0aax/MYCw== | 1 | 2 | 0 | YQjMe2SPiTIadv7J4MQ+0A== | 2 |
2 rows in set (0.00 sec)
mysql> select * from account_summary;
 account_id | balance | balance_type | currency | total_limit |
         1 | 120.00 | Credit | f
2 | 10.00 | Debit | f
                                                   2000.00
                                                   1000.00
2 rows in set (0.02 sec)
```

Source Code

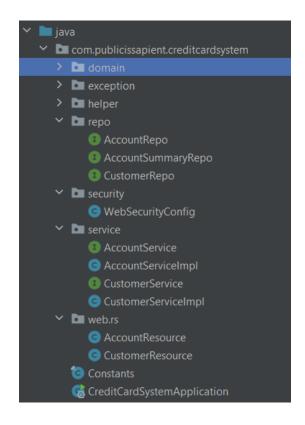
https://github.com/nainyogita/ps-credit-card-system

Directory Structure:



Source Files:





Unit and Integration Testing:

Integration Tests:

- ✓ ✓ AccountResourceIntegrationTest
 - ✓ verifies if createAccount method returns error for bad request
 - ✓ verifies if createAccount method creates a new account
 - ✓ verifies if getAllAccounts returns list of accounts

Unit Tests:

✓ Test Results

- CreateAccountResourceUnitTest
 - ✓ verifies that checkLuhnSum method is called for Cardnumber verificatio
 - ✓ verifies that validation error is returned if card number is null
 - ✓ verifies that controller calls the account Service for account creation
 - ✓ verifies that returns 201 status response for valid payload

✓ ✓ Test Results

- ✓ ✓ GetAllAccountsResourceUnitTest
 - ✓ verifies that controller returns 200 status for success response
 - ✓ verifies that controller calls accountService for fetching all accounts
 - ✓ verifies that controller returns the list of all accounts