BankingApp Capstone Project:

Design and Develop Banking Application to manage account and transaction details with micro services based
architecture with below services and technology stack with automated containerisation deployments into on promise and cloud infrastructure.

Technology Stack:

Spring Boot + Spring Cloud + REST API + Validation + Spring Data JPA / H2 + MySQL/MongoDB + Kafka +
Unit Testing and Integration/API Testing with 80% coverage + Docker + K8s + Azure Cloud + Agile Scrum

```
bankingapp
        |
        |__account-service
        |
        |__transaction-service
        |
        |__fund-transfer-service
        |
        |__notification-service
        |
        |__gateway-service
        |
        |__registry-service
        |
        |__config-service
        |
        |__auth-service
        |
        |__admin-service
        |
        |__bankingapp-ui
```

REST API

```
Account Service [account-service]
GET     /accounts
GET     /accounts/{id}
POST    /accounts
PUT     /accounts/{id}
DELETE          /accounts/{id}
GET     /accounts/search
POST    /accounts/{id}/deposits         [SYNC - REST API]
POST    /accounts/{id}/withdrawal       [SYNC - REST API]

Transaction Service [transaction-service]
GET     /transactions
GET     /transactions/{id}
POST    /transactions

Fund Transfer Service [fund-transfer-service]
POST    /fundTransfers                  [ASYNC - MESSAGING]

Notification Service [notification-service]     [ASYNC - MESSAGING]     Event Driven
```

Account

```
        int id
        String name
        AccountType type
        double balance
        double roi
        boolean active
        LocalDateTime createTimestamp
        LocalDateTime updateTimestamp
```

```
{
        "name": "xyz",
        "type": "Savings|Current|Loan",
        "balance" 50000.0,
        "roi": 7.5
        "active": true|false
        "createTimestamp": "2023-02-16T16:00:00",
        "updateTimestamp": "2023-02-16T16:00:00"
}
```

Transaction

```
        int id
        TransactionType type
        String description
        double amount
        Account account
        LocalDateTime transactionTimestamp
```

```
{
        "type": "Credit|Debit",
        "description": "School Fee"
        "amount": 50000,
        "accountId": 100,
        "transactionTimestamp": "2023-02-16T16:00:00"
}
```

Fund Transfers

```
{
        "sourceAccountId": 100,
        "targetAccoundId": 200
        "amount": 50000,
        "description": "School Fee"
}
```

Package
=======

```
com
  |
  |___ blueyonder
            |
                  |______ bankingapp
                                   |
                                   |_____ AccountServiceMain | TransactionServiceMain
                                          FundTransferServiceMain | NotificationServiceMain
                                          RegistryServiceMain | GatewayServiceMain |
                                          AdminMain

                                   |
                                   |______ service
                                                |
                                                |_____ AccountService
                                                |
                                                |_____ TransactionService
                                                |
                                                |_____ FundTransferService
                                                |
                                                |_____ NotificationService

                                   |
                                   |_______ model
                                                 |
                                                 |____ Account
                                                 |
                                                 |____ Transaction
                                                 |
                                                 |____ FundTransfer

                                   |
                                   |_______ repository
                                                 |
                                                 |_____ AccountRepository
                                                 |
                                                 |_____ TransactionRepository
                                                 |
                                                 |_____ FundTransferRepository
                                   |
                                   |_______ exception
                                                 |
                                                 |_____ NoAccountFoundException
                                                 |
                                                 |_____ AccountValidationException
                                                 |
                                                 |_____ AccountException
                                                 |
                                                 |_____ NoTransactionFoundException
                                                 |
                                                 |_____ TransactionValidationException
                                                 |
                                                 |_____ TransactionException

                                   |
                                   |_______ util
```