**Payment Gateway**

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| **1** | **Name of the Project** | **Money and Monitory** | |
| ***2*** | **Problem Statement** | Design a system  which credits extra spent by customers back into their accounts, as rounded off figure.Customers who make a debit card transaction have that transaction rounded up to the nearest pound and that ‘extra’ credited to an instant access savings account. The ability to have round ups will be controlled in the  app which will drive digital adoption using any device, while encouraging customers to get into the savings habit. NWG Bank's aim is to provide all personal customers a way to save easily to aid advancement in Bank's goal of helping more customers save more. As a “round up “service, customers who make a debit card transaction have that transaction rounded up to the nearest pound and that ‘extra’ credited to an instant access savings account. The ability to have round ups will be controlled in the mobile app which will drive digital adoption while encouraging customers to get into the savings habit. | |
| **3** | **Objective/ Vision** | Design a platform for Bank customers to encourage the practice of saving. | |
| **4** | **Users of the System** | Natwest Bank Customers | |
| **5.** | **Assumptions** | 1. The Customer already has a primary account with Natwest | |
| ***6*.** | **Functional Requirements** | **1.Customer should be able to register using their phone number or registered email id.**  **2. Customers should be able to Login using phone number and OTP**  **3.Customers should be able to link the primary account with the savings account.**  **4.Customers should be able to pay merchants using the web application.**  **5. Customers should be able to transfer funds from the savings account to the primary accout.**  **6. Customers should be able to see the list of transactions made by them.**  **7. Customers can make use of chatbot to understand the web application** | |
| **8.** | **Tools and Technologies to**  **be used** | | 1. Frontend – React, HTML, MUI 2. Backend - Spring Boot, Micro-Service architecture 3. Database – MySql |
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Components of the Project:

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| Database Models | Description |
| **Account** | CustomerId  AccountNumber  Balance  CardName  Cvv  Email  ExpiryDate  firstName  LastName  LinkedSavingsAccounts  Type  PhoneNumber |
| **SavingsAccountDetails** | SavingsAccountNumber  BalanceSavingsAccount  CustomerId  Email  FirstName  LastName  PrimaryAccounts |
| **Transaction** | TransactionID  AmoutToMerchant  AmountToSavings  Date  Time  Description  FromAccountNumber  ToAccountNumber  ToAccountHolderName  Type  UserEmail |
| **GoogleUserProfile** | Sub  Name  GivenName  FamilyName  Email  EmailVerified  Picture |
| **User** | Id  FirstName  LastName  Email  PhoneNumber  CountryCode  ProfileImageURL  Gender  Status  RegisteredOn  LastLogin  LastBlockedOn  DateOfBirth  LastProfileUpdatedOn |

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| Services | Description |
| **UserSerive** | RegisterCustomer  LoginCustomer  GenerateOTp |
| **Transaction** | GetAllTransactions  AddTransaction |
| **Account** | Create Primary Account  Create Savings Account  Link Savings and Primary Account |
| **SendEmail** | Send Weekly Updates. |

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| UI Components | Description |
| **Login** | Customer perform login using this component |
| **Register** | Customer can sign up using this component |
| **Link Savings** | Customers can link the primary account with the savings account. |
| **Transfer To Merchant** | Customer can make payments to merchant using this component. |
| **Transfer To Primary** | Customer can transfer funds from savings to primary. |
| **Transaction History** | Shows previous Transactions. |

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| **Future Scope** | We can Include an dashboard for the user to view their saving habits. Also giving investment advice to the users. |