

B-PURSE SYSTEM

Software Design Description(SDD)

Members:

SAMUEL DUSHIMIMANA
MAKUZA MUGABO VERITE
SEKATA EIMELYSE MOSS
MUHODARI SAGE
EMMY NSHIMIYE

Doc Version: 1.0

Table of Contents:

TABLE OF CONTENT

Introduction	1
Database Design	2
Data Dictionary	3
Hierarchical Input Process Output Diagram (HIPO)	4
Data Flow Diagram	5
User Interface	6

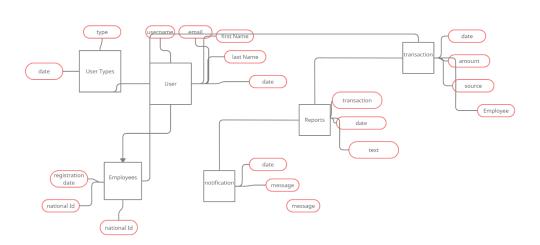
1. Introduction

The goal of this project is to make budgeting and transaction tracking easier for accountants. The majority of the time, accounts are handled manually utilizing excel sheets. Keeping track of the records is quite time-consuming. By developing software that can be utilised at any time, we want to reduce the complexity of managing transactions and budgets.

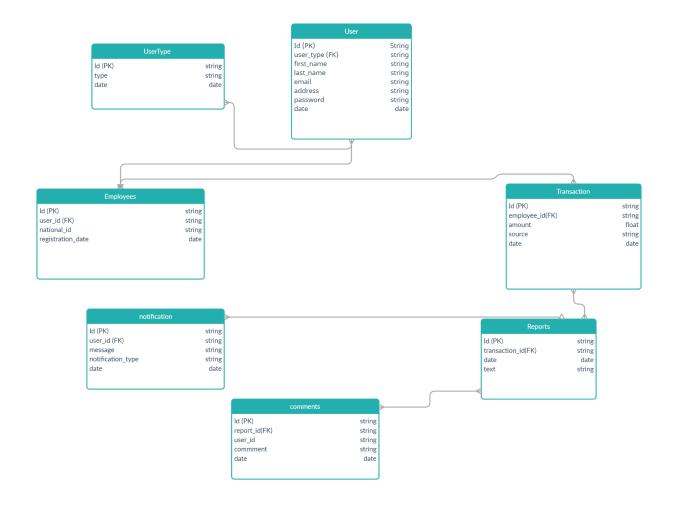
2. Database Design

Entity Relationship Model

4



Entity Relationship Diagram



List of Abbreviations

3. Data Dictionary

This is the data dictionary of the application. It contains all the main tables we will use in the system with the attribute name, description, data type, constraints if the attribute is required, and the example for each attribute and for each table.

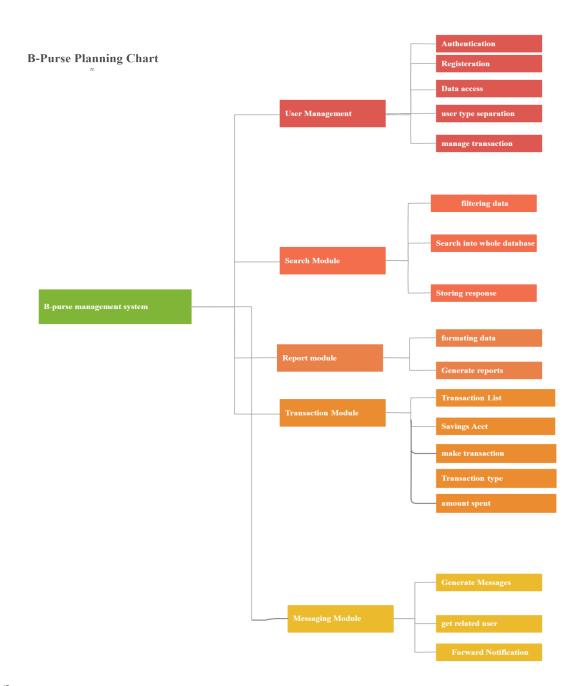
attributes	attributes					
name	description	data type	Another Constraints	is require d	example	
id	The id of the user	int(8)	Primary key	TRUE	1	
First name	the first name of the user	varchar(20)		TRUE	Kalisa	
email	the email of the user	varchar(30)	unique	TRUE	kalisa@gmail.com	
phone	The phone of the user	varchar(15)	unique	FALSE	0783384212	
Last Name	The last name of the user	varchar(20)		TRUE	Augustin	
role	The role of the user	enum		TRUE	ADMIN	
id	The identifier of the event	int(8)	Primary key	TRUE	1	
user_id	The reference to the creator	int(8)	Foreign key	TRUE	1	
message	The message from user	varchar(100)		TRUE	Transaction was successfully	
notification_ type	The type of notification	varchar(50)		FALSE	success	
date	The datetime notification was recieved	datetime		TRUE	2020-12-12 08:00:15	
id	The identifier of the comment	int	Primary key	TRUE	32	
user_id	The reference to the creator	int	Foreign key	TRUE	243	
report_id	The reference to the report	int	Foreign key	TRUE	3244	

comment	The comment of the user	varchar(100)		True	This is a nice report
date	The datetime comment was made on a report	datetime		TRUE	2020-12-12 08:00:15
id	The identifier of the report	int	Primary key	TRUE	35
transaction_ id	The reference to the transaction	int	Foreign key	TRUE	2121
text	Detailed report message	varchar(200)		TRUE	Two students deposited twenty thousand frw
date	The datetime report was generated	datetime		TRUE	2020-12-12 08:00:15
id	The identifier of the employee	int	Primary Key	TRUE	11
user_id	The reference to the user	int	Foreign key	TRUE	25
national_id	The national identifier of employee	varchar(16)		TRUE	122313123674724
registration _date	The datetime employee was created	datetime		TRUE	2020-12-12 08:00:15
id	The identifier of the tag	int	Primary key	TRUE	34
employee_i	The reference to the employee	int	Foreign Key	TRUE	456
amount	The amount of money transacted	float		TRUE	100.250
source	Source of the money	varchar		TRUE	From the bank
date	The datetime transaction was	datetime		TRUE	2020-12-12 08:00:15

_	made		

4. Hierarchical Input output Diagram (Hipo)

This is among the very inport diagrams in project design and analysis as it is the diagram that shows the input to the system and the process that occurs to produce final output according to different functionality in this B-purse system.



In Authentication

Authentication

- Emailpassword
- check for credentials validity
- forget password redirection
- redirect of user to dashboard according to his/her type
- Login as User
- Login as Administrator
- Registration page

Search

search

- Search key word
- Filtering type
- > Date range
- Check the matching keyword in data
- Arrange according to search type of data to come first
- Return all data found in specified date range
- Check if Entered data are valid

- return found data to user
- redirect user to the response found
- provide response message

Report

. . - -- -- - - - - -

Report

- ➤ Date range
- Transaction type
- Check for transaction exist in date range
- Verify transaction of provided transaction type
- Format provided data
- Generate report

- · Return report
- Able to Edit report
- Print the report
- Sign to report

Transactions

Transactions

- Expenses
- Cost per expense
- > Source of income
- Check if the user is authorized to do such action
- Verify if total costs match with cost per expense
- Verify if Entered data are valid
- Reduce total balance by total amount spent on expenses
- Carry out and transaction and record it in database
- Redirect user to list of all transaction made

- Reduction of Balance
- Store of data in database
- Return amount spent and remained balance

Messaging

Messaging

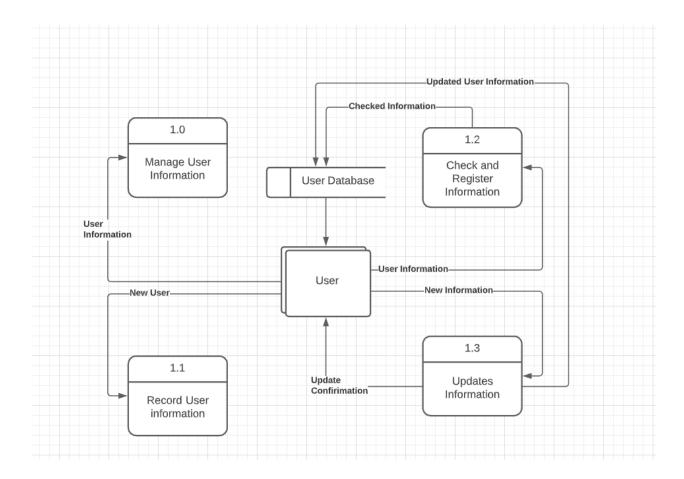
Messaging

- ➤ Email/phone
- ➤ Message

- Check if email is registered
- Verify for email existence among active users
- Verify if message is appropriate
- Forward message to the user
- Notification message to user device
- Page of previous sent messages

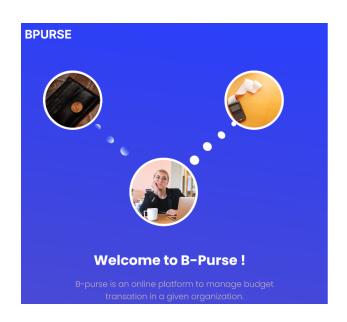
5.Data Flow Diagram

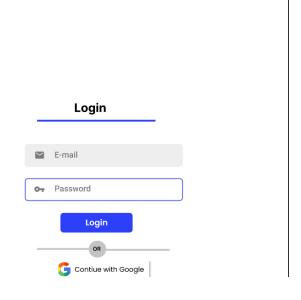
User Management Module



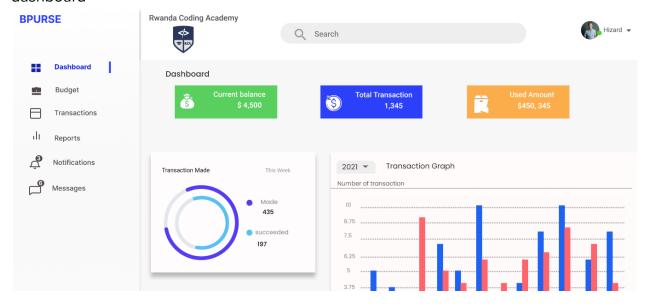
Budget Management Module

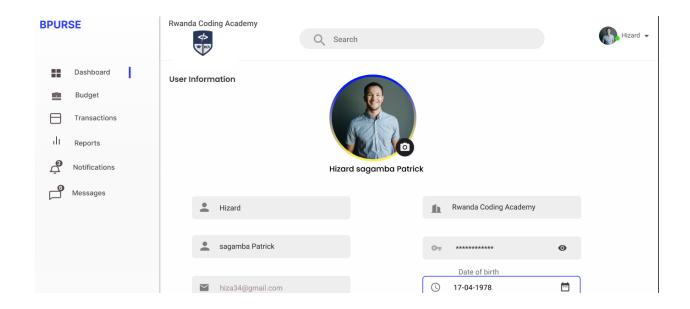
6.User interface





dashboard





More screens can be found here:

 $\frac{https://www.figma.com/proto/B1AWIKw468zNVLa2ZZJsYI/B-purse-App?scaling=scale-down-width&page-id=0\%3A1&node-id=71\%3A61$