## A project report

on

## Banking Management System

# Submitted in partial fulfillment of the requirement of Project – II (BIT179C0)

of

Bachelor of Information Technology (BIT)

### Submitted To



# Purbanchal University Biratnagar, Nepal

## Submitted By

Nima Dawa Sherpa Symbol no. 325011

Subash Pandey Symbol no. 325024

Laxman Basnet Symbol no.325007

### KANTIPUR CITY COLLEGE

Putalisadak, Kathmandu August 14, 2021

## A project report

on

## Banking Management System

# Submitted in partial fulfillment of the requirement of Project – II (BIT179C0)

of

Bachelor of Information Technology (BIT)

Submitted to

Purbanchal University Biratnagar, Nepal

## Submitted By

Nima Dawa Sherpa Symbol no. 325011

Subash Pandey Symbol no. 325024

Laxman Basnet Symbol no. 325007

Project Supervisor
Ashim KC

#### KANTIPUR CITY COLLEGE

Putalisadak, Kathmandu August 14, 2021

# **Topic Approval Sheet**

This is to certify that this project report entitled "Banking Management System" made by "Nima Dawa Sherpa, Subash Pandey and Laxman Basnet" of Bachelor of Information Technology, 2nd semester has been found suitable as per the credit given by Kantipur City College and Purbanchal University, Biratnagar Nepal.

MR. Saroj Pandey Mr. B
Head of Department Proj

Mr. Bikash Neupane Mr. Project Coordinator Pro

Mr. Ashim Kc
Project Supervisor

# **Certificate from Supervisor**

This is to certify that this project report entitled "Banking Management System" submitted to Kantipur City College, is a bonfire record of work done by "Nima Dawa Sherpa, Subash Pandey and Laxman Basnet" under my supervision.

Mr. Ashim KC

**Department of Information Technology** 

**Kantipur City College** 

(Project Supervisor)

## Acknowledgement

First, we would like to thank Purbanchal University (PU) and Kantipur City College (KCC) for proving us the opportunity that helped us to know more about C++ Programming and how to make a complete project with using it. We also like to thank Mr. Bikash Neupane for helping for writing program in C++.Not Only that We also like to thank to our Supervisor Mr. Ashim KC for providing necessary information and his guidance regarding this project. This assignment was not possible to complete without the help and guidance of some respected person who deserves our deepest gratitude. In this project making process we play equal responsibility to complete this project in time and also consult with senior students, classmate.

Nima Dawa SherpaSubash PandeyLaxman Basnet

#### **Abstract**

Banking management system can be consider as almost important thing in economic world, in the present scenario the banking sector is the common need in everyday life, in day to day life we face the problems and then we realize something is not done in this sector like we want to change the singularity in software platform with marge both higher level and lower level management system in one software. This system can hold the overall information and users are provided the facility of transactions like deposit, withdraw account and see account holder's list, update and can easily close their account. We use different functions in our Systems and also use file handling to recording the user's information. In the future if any new features found or available in that case we provide this facility through the our project i.e. Bank management system

Figure Number	Figure	Page Number
3.2	Algorithm	9-12
3.3	Flowchart	13-19
	Appendix-1	24-26
	Appendix-2	27-32

List of Tables			
Table Number	Table	Page No.	
1.7	Assignment of Roles and Responsibility of the members.	3	
1.8	Documentation Organization	4	
1.9	Hardware and Software Requirement	5	
2.1	Requirement Gatering Process	6	
2.3	Gantt Chart	7	
3.1	Functional Analysis	8	

List of Symbols				
Symbol	Name	Description		
Number				
	Oval	Represents a complete Algorithm Begin/Start and End/Stop.		
	Rectangular Shape	The process or actions such as Calculations, Input/Output and		
		Operations.		
	Input or Output	The data or Input/output.		
	Diamond or Decision	Which indicates that the decision is to be made such as choice between YES or NO.		
	Flowlines	Indicates the order in which an operation is performed.		
	Small Circle or Connector	When describing a portion of an algorithm continued from or will continue on.		
	True Symbol	Indicates the condition is True.		
F	False Symbol	Indicates the condition is False.		

Abbreviations		
Short Form	Full Form	
DOB	Date of Birth	
KCC	Kantipur City College	
PU	Purbanchal University	
AD	Anno Domin	
BS	Bikram Sambat	
RAM	Random Access Memory	
ROM	Read Only Memory	
OS	Operating System	
HDD	Hard Drive Disk	
HOD	Head of Department	
I/O	Input Output	
MB	Mega Byte	

# Table of Content

Acknowledgement	i
Abstract	ii
List of Tables	iv
List of Symbols	v
Abbreviations	vi
Chapter 1: Introduction	1
1.1 Project Introduction	1
1.2 Literature Review	1
1.3 Problem Statement	2
1.4 Objectives	2
1.5 significances	2
1.6 Features	3
1.7 Assignment roles and responsibilities of the members	3
1.8 Documentation Organization	
1.8 Hardware and Software Required	5
Chapter 2: System Analysis	6
2.1 Requirement Gathering Process	6
2.2 Feasibility study	7
2.3 Gantt Chart	7
Chapter 3: System Design	8
3.1 Function Analysis	8
3.2 Algorithm	9
3.3 Flowchart	13
Chapter 4: System Development and Implementation	20
4.1 Programming platform, (Tools & technologies used)	20
4.2 Operating environment	20
4.3 Testing and Debugging	20
4.4 Implementation and Result Analysis	20
Chapter 5: Conclusion and Further Enhancement	21

5.1 Conclusion	21
5.2 Limitations	21
5.3 Future Enhancement	22
References	23
Appendix	24
Appendix-1 (Output Screenshots)	24
First Screenshot	24
Second Screenshot	24
Third Screenshot	25
Fourth Screenshot	25
Fifth Screenshot	26
Sixth Screenshot	26
Appendix-2 (User Manual)	27

## **Chapter 1: Introduction**

### 1.1 Project Introduction

The project entitled "Banking management system" is a simple application build in C++ associated with the bank. A user can perform many kinds of management tasks to manage customer bank records like adding a new account, modifying and closing it. Also, users can view all customer accounts, check account balance as well as deposit and withdraw money from accounts. User need not to reach the bank for transactions. Banking Management System is a management application made to fulfill the maximum digital features. This software application made for two kind of user higher level management and lower level management. Where in the software application we mention admin and accountant. In the Modern Age, Banking System has changed and this system is saving time. This system is developed for development of the banking sector. Admin can look accountant's record after account details of accountant how much they deposit or withdraw amount and also check the balance. User will feel comfortable for using this application.

#### 1.2 Literature Review

This is the era of digitalization. In every field there is possible to implement digital system. We visited two banks (Nic Asia Bank Manmaiju branch, Prime bank Manmaiju branch) near to us and we found that they don't have a proper banking management system. Specially in digital sector like used software are not user friendly, different level management are not marge so, to deal with this problems we research different website like www.w3school.com, www.codewithc.com, www.projectideas.com, studied application building process few weeks. In that timed we found a lot of books about C++ programming. We got Dummies for C++ programming and Code with C++ programming which was the best book to gain required knowledge to complete this project. We also used our course book Programming in ANSI C++ too to gain knowledge. We started from beginning to studied those books and note important parts. We implement lot of programming ideas in our project. Like function, file, loop and switch case. We studied about graphics from internet and watched few videos in YouTube. We deal with a lot of problem at testing and debugging time. We did case studied of errors and found the solution ourselves most of the time or consulted with supervisor and implemented his advised.

#### 1.3 Problem Statement

Most of the software are costly and can't afford by bank. Other software are not bank specific. We have discussed, read books, visit website in order to research different kind of banking management system project for clarification of our problem statement. After analyzing and comparing between our own project and another project, we got vast difference between two systems. Like, our system has made only accessible for Higher level management (admin) and lower level management but that system made the way like only high -evel managers can access CEO, MD, bank president. Our system can run only specific region (means: we developed this only for particular areas not accessible for international purpose). But that system can access everywhere. And we found our system is less costly as compare as others BMS system.

## 1.4 Objectives

#### Our main objective of this project is:

- To provide digital platform to make day to day work easy, increase the paper-less transaction and increase the employee performance.
- To marge admin and accountant platform in same software with different login system.

### 1.5 significances

#### Some important significances of this project are:

- User can use this software without taking extra training with using our provided user manual.
- This software consumed less storage and RAM to install.
- In this software Admin can control Accountant account and can access day to day transaction.
- In this software Accountant can control account holder's account and modify.

### 1.6 Features

## Some important features of this project are:

- Add account
- Update account details
- Close account
- List all current account
- Check balance
- Withdraw balance
- Deposit balance
- Modify account holder name
- Print transaction slips of amount deposit and withdraw

## 1.7 Assignment roles and responsibilities of the members

Member's Name	Task Performed
Nima Dawa Sherpa	Documentation, System Designing, Coding and Requirement Gathering
Subash Pandey	Documentation and Requirement Gathering, System Designing
Laxman Basnet	Documentation and Requirement Gathering, System Designing

# 1.8 Documentation Organization

# We organize our documentation as below table:

Chapter 1	This chapter consists of Introduction which are divided into various parts:			
	1.1 Project Introduction			
	1.2 Literature Review			
	1.3 Problem Statement			
	1.4 Objectives of the Project			
	1.5 Significance of the Project			
	1.6 Features of the project			
	1.7 Assignment of Rules and responsibility			
	1.8 Documentation Organization			
Chapter 2	This chapter is about system analysis which is divided into some parts:			
	2.1 Requirement Gathering Process			
	2.2 Feasibility Study			
	2.3 Gantt Chart			
Chapter 3	This Chapter is about system design which are divided such as:			
	3.1 Functional Analysis			
	3.2 Algorithm of the program			
	3.3 Flowchart of the Program			
Chapter 4	This Chapter is about System Development and implementation of the			
	project consisting of:			
	4.1 Programming Platform			
	4.2 Test Plan			
	4.3 Implementation and result analysis			
Chapter 5	This Chapter is about Conclusions and Future Enhancement:			
	5.1 Conclusion			
	5.2 Limitations			
	5.3 Future Enhancement			

## 1.8 Hardware and Software Required

Hardware Required	Software Required
1. RAM min 500 MB required	1. It supports in all kinds of OS platform which need to be install C++ compiler and IDE.
2. HDD 300 MB space required	
3. All Latest series CPU can process.	

(Note: The above hardware and software requirement information can be different on its update version. The given hardware requirement is needed in installation time the hardware requirement needed more after using it or update data.)

# **Chapter 2: System Analysis**

## 2.1 Requirement Gathering Process

For the project we needed few things which we managed to gather it all up. Thanks to our group which made it possible to conduct the project efficiently. The below mentioned are the requirements, its description, gathering process and with its functions.

Requirement	Requirement	Requirement Process of		Function
no.	name	description	gathering	no.
1.	Turbo c++	It's a compiler, which will compile our program and make it able to run into any computer that fits it basic	We downloaded it from the internet.	first
		running		
2.	Information	How this project work and complete.	Searching internet consulting with Team members.	second
3.	Source code	Control and command the application in C++ programming.	We use our knowledge most of the time and we also search website.	third
4.	Output	How to display and how its looks like.	We used Google. And couple of books, and our own knowledge.	fourth

## 2.2 Feasibility study

Feasibility tried to determine whether a given project (solution) would work or not, its main objectives is not solved the problem, but to acquire its scope.it focuses on following factors:

- Meet user requirement (operational factors both management and user satisfaction)
- Best utilization of available resources.
- Develop a cost-effective system (economically)
- Develop a technically feasible system.
- These above factors are the main factor that involve during developing a banking management system.

## 2.3 Gantt Chart

SN	Week Strategy	1 <sup>st</sup> week (2021- 05-15)	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week	5 <sup>th</sup> week	6 <sup>th</sup> week
1.	Problem Identification						
2.	Research and analysis						
3.	Design						
4.	Coding						
5.	Implementation and testing						
6.	Documentation						
7.	Project Finalization						

# **Chapter 3: System Design**

# 3.1 Function Analysis

Function Number	Function Name	Function Description
1.	int main()	This function work to start program with return values.
2.	Class MANAGER() class ACCOUNTENT() AND class BMS()	This class helps to denote separated function of this class.
3.	void main()	This function work to start program but do not return values.
4.	getch()	This function work to get data of program.
5.	set color()	This function work to set color of fonts.
6.	system("cls")	It clears the current text window and place the cursor in the upper left-hand corner
7.	cout <<	This function work to print statement to show in screen.
8.	cin >>	This function work to get input form user.
9.	Manager_option() and	This function helps to go back to main menu.
	Accountent_Option()	
10.	welcome() and closed()	This function work to display welcome screen and close screen.

## 3.2 Algorithm

```
Step 1: Start
```

Step 2: Display Banking Management System

Step 3: Enter Choice from Login Menu

Step 4: If User Choice is 1 to 3,

If user Choice is 1, enter username and password for admin

Then Display "Login Successful"

**Display Admin Option** 

Enter the Option from 1 to 8

If user choice is 1 to 8,

If user choice is 1, then display transaction details

After that, enter the option from 1 to 3

If user choice is 1, display "Deposit Details"

Press any key to return transaction menu

Else if user choice is 2, display "Withdraw Details"

Press any key to return transaction menu

Else if user choice is 3, display "Withdraw Details"

**Display Admin Option** 

Else if user choice is 2, then display "account Holders List"

Press any Key to Return Admin Menu

Else if user choice is 3, then display "accountant list"

Press any Key to Return Admin Menu

Else if user choice is 4, then show page for entering Accountant id

Display "Account Details"

Else if user choice is 5, then create new accountant id

After That "Display data save in file"

Display "create new accountant id" and

If User Press y or Y, again display "create new id page"

Else Display "Press any key to return to main menu"

Else if user choice is 6, then "display accountant id to update Account"

Enter the Id of old account

Then display "do you want to delete accountant data"

Enter y for yes and n for no

If user choice is y or Y, then enter new account data to update

And Display "Accountant data updated successfully"

Else new Account Data is Not Updated and

Then Display Press any key to return to main menu

Else if user choice is 7, then display "accountant id to delete Account"

Enter id of accountant and Display "press y or Y for Y or n or N

Enter y or Y OR n or N

For No"

If user choice is y or Y, display "accountant data deleted"

Successfully and press any key to return admin menu

Else display "accountant Data is not deleted" and press

Any key to return main menu

Else if user choice is 8, then Display "Return Login Menu, Please Wait"

Else Display "Please Select Option from 1 to 8"

Else if user choice is 2, Display "Accountant Login Option" for accountant

Enter Username and password and then Display "Login Successful"

After that show Accountant menu and Display Select Option From 1 to 8

If user choice is 1 to 8,

If user choice is 1, then display "create account"

Enter account details to create account

Then Display "Account Created Successfully"

Show Press y or Y to create another account and n or N to

return accountant menu

If user choice is y or Y, then again display "enter details to

Create account

Else Press any key to return accountant Menu

Else if user choice is 2, then display "Deposit Amount"

Display "Account Details"

Press y or Y to deposit amount and n or N to return to accountant

Menu

If user choice is y or Y

Enter Amount to be deposited

Display "Amount Deposited Successfully"

Enter any key to return accountant menu

Display "Amount Deposit Slip"

Else Display "Amount is not deposited"

Enter any Key to return accountant menu

Else if user choice is 3, then display "Withdraw Amount"

Display "Account Details"

Press y or Y to withdraw amount and n or N to return to

Accountant Menu

If user choice is y or Y

Enter Amount to be withrawn

Display "Amount Withdrawn Successfully"

Enter any key to return Accountant menu

Display "Amount Withdraw Slip"

Else Display "Amount is not withdraw"

Enter any Key to return accountant menu

Else If user choice is 4, then display "account Holders List"

Press any Key to Return Accountant Menu

Else if user choice is 5, then enter accountant id to search

Display "Accountant Details"

Press any Key to Return Accountant Menu

Else if user choice is 6, then display "accountant id to update account"

Enter the Id of old account

Then display "do you want to delete accountant data"

Enter y for yes and n for no

If user choice is y or Y, then enter new account data to update

And Display "Accountant data updated successfully"

Then Press any key to return to Accountant menu

Else Display "new Account Data is Not Updated" and

Then y Press any key to return to Accountant menu

Else if user choice is 7, then display accountant id to close account

Enter id of accountant and Display "press y or Y for Y or n or N

For No"

Enter y or Y OR n or N

If user choice is y or Y, display "accountant data closed"

Successfully and press any key to return admin menu

Else display accountant "Data is not closed" and

Press any key to return Accountant menu

Else if user choice is 8, then Display "Return Login Menu", Please

wait

Else Display "Please Select Option from 1 to 8"

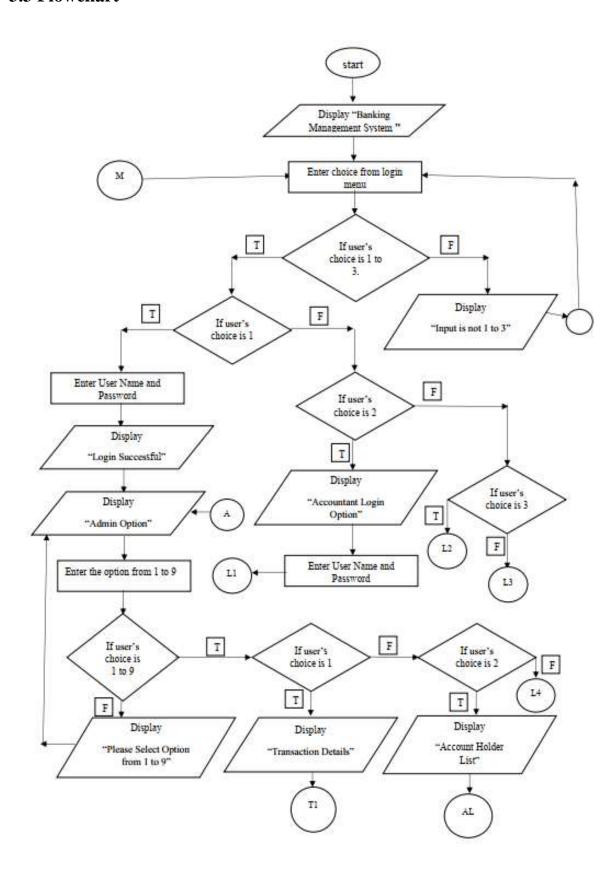
#### Else

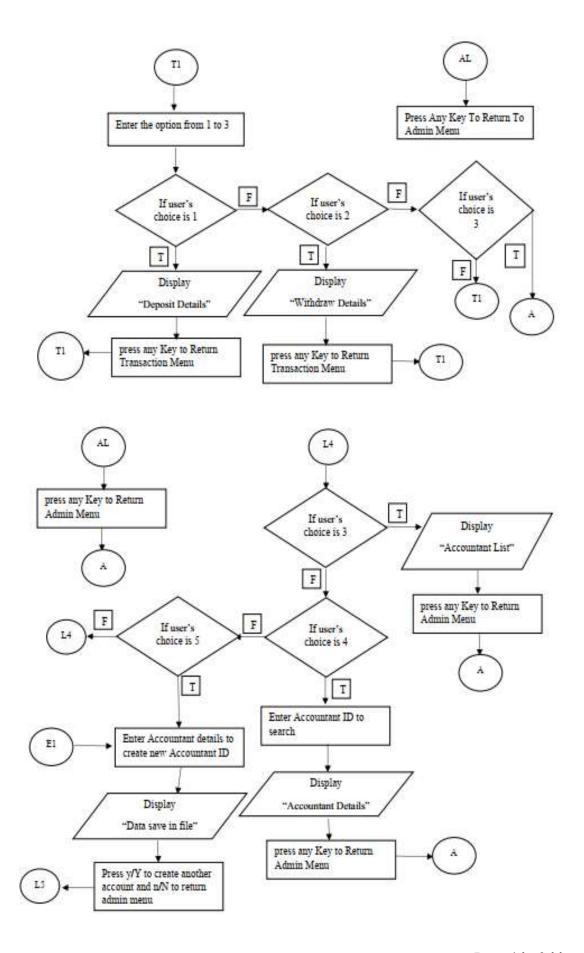
If user choice is 3, Display "Thanks For Using Our System"

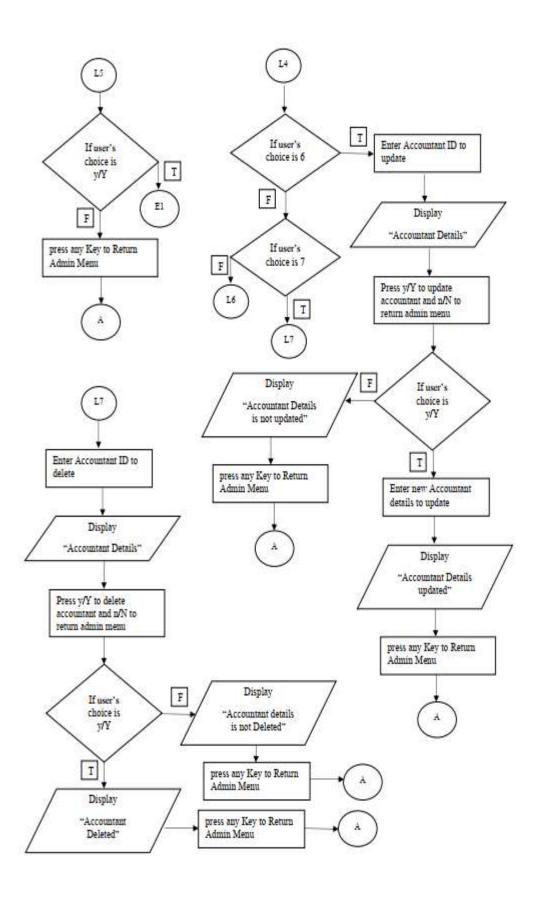
Else Display "Enter Numbers from 1 to 3"

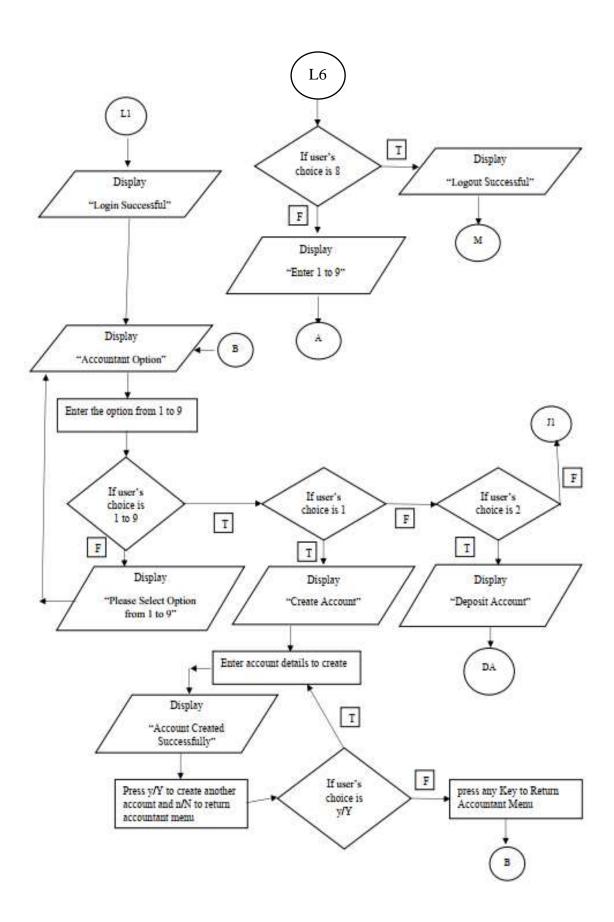
Step 5.Exit

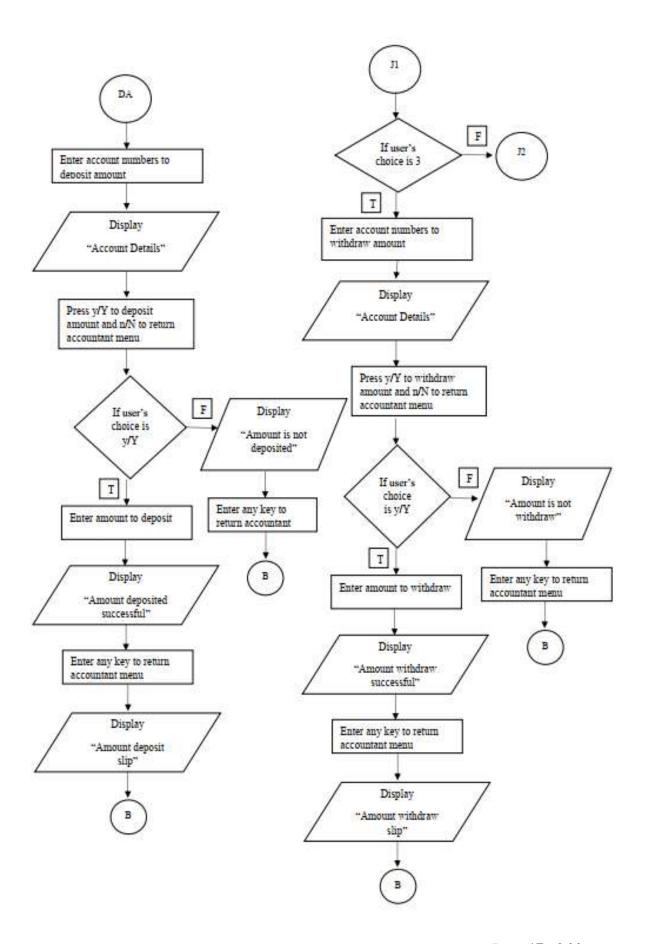
### 3.3 Flowchart

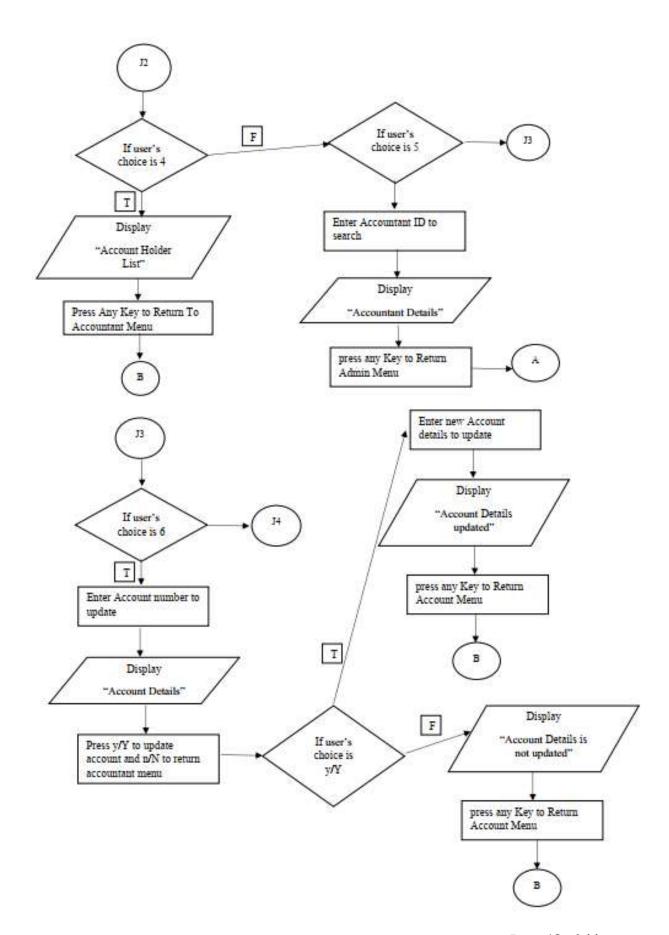




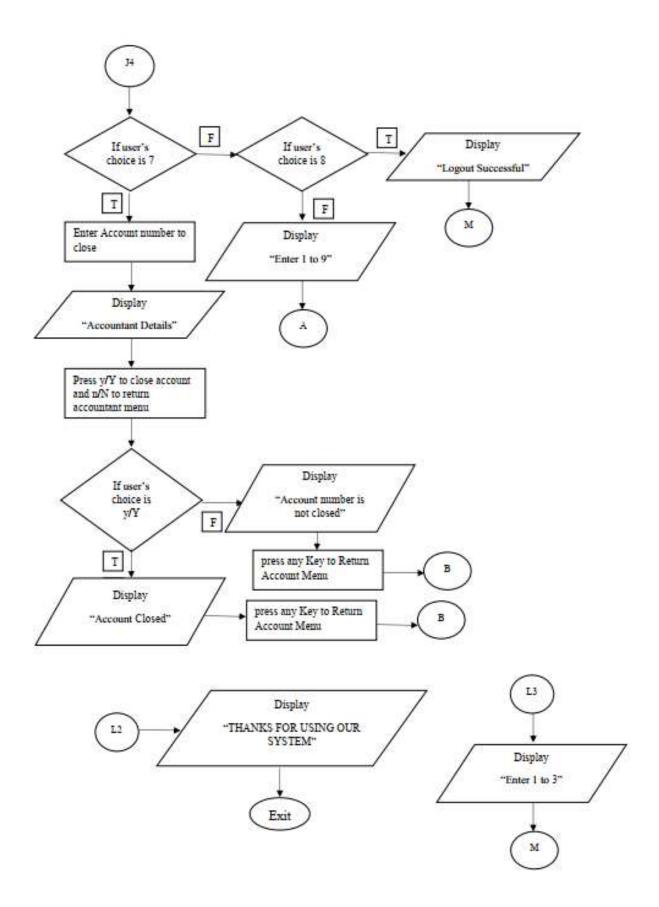








Page 18 of 44



## **Chapter 4: System Development and Implementation**

## 4.1 Programming platform, (Tools & technologies used)

For the programming we use notepad++ for code editing, Code block and Turbo C++ for compiler and code editing.

## **4.2 Operating environment**

The following program is created in 64-bit windows 10 operating system with 8GB storage of processor Intel core i5 9<sup>th</sup> generation with CPU 2.40 GHZ.

## 4.3 Testing and Debugging

Apart from the programs there were some errors in the program like user may enter the date, month, year but the compiler does not give correct output for this program and similar problems occurred in other codes creating troubles while programming and the errors while execution was found after debugging. Many coding parts were not correct and was problems in graphics part too.

## 4.4 Implementation and Result Analysis

Our team members found the errors and bugs such as the functions were not declared in some Parts, semi colon was missing and many more errors were detected. These errors were get fixed after the discussion between the members and take long time to fix the bugs and errors in the program.

## **Chapter 5: Conclusion and Further Enhancement**

#### 5.1 Conclusion

We finally conclude that using this project we can provide a great interface between the user and the banking environment, thus satisfying the requirements of multiple users. Users can see account holder list, with draw, deposited amount, can also modify their account.so, It provides an efficient way for people to involve in on-line transactions. We are providing a monitoring mechanism for admin which is having the ultimate power. And finally, the users will be satisfied with our service.

#### 5.2 Limitations

This Application has some limitations or drawbacks, which are listed below:

As we know that no any program can be 100% reliable and efficient.so there are some drawbacks from our system which are as follows:

- Only current account can create, other account types features are not available.
- Only Admin can create new Accountant ID and Only Accountant can create, modify, transact amount and close Account.
- Interest rate features is not available.
- Balance cannot transfer without withdraw and deposit.

### **5.3 Future Enhancement**

The Future enhancements of this program are as follows:

- Number of account types can be added. Like fixed deposit, saving account, insurance etc.
- Forgot password, username function can be added with implement OTP system.
- This software can made in other different language like python, java, .Net etc. to implement which features is limited in C++ language.
- In the futures if any new facilities came in banking system can be implemented and linked.

## References

- [1] E. Balagurusamy, 2015. Object Oriented Programming with C++, 6th Edition. Published by Tata McGraw Hill Education Private Limited,7 West Patel Nagar, New Delhi 110 008, studied on 2021-02-12.
- [2] Dan Gookin, 2004. C++ For Dummies: 2nd Edition. Published by Wiley Publishing, Inc., Indianapolis, Indiana 111 River Street Hoboken, NJ 070305774, studied on 2021-02-20.
- [3] Website: www.codewithc.com .Visited on 2021-02-12.
- [4] Website: <u>www.w3school.com</u>. Visited on 2021-02-16.
- [5] Website: www.code with C.com, www.projectideas.com. Visited on 2021-02-25.

## **Appendix**

## **Appendix-1 (Output Screenshots)**

#### **First Screenshot**

#### **Second Screenshot**

#### **Third Screenshot**

#### **Fourth Screenshot**

#### **Fifth Screenshot**

#### Sixth Screenshot

## **Appendix-2 (User Manual)**

This user manual helps user to use our Banking Management application in easy way.

- Step 1: Goto the location C drive and select Banking Management System Folder and open it and there you will see the c++ source file.
- Step 2: Open the application either in Codeblock or dev c++.
- Step 3: After successfully Opened Click the run option given in the compiler to run program.
- Step 4: after run the program you will see this screen.



Step 5:Enter Any Key to goto login menu which looks like this

Step 6: if you select 1 you will see this screen.

Step 7: After Successfully Login you will see this screen.

Step 8: if you select 1 then you will see this screen.

```
#
     LOGIN OPTION MENU
                   #
#
     [1] DEPOSIT DETAILS
                   #
     [2] WITHDRAW DETAILS
                   #
     [3] BACK
                   #
                   #
    SELECT OPTION (1-3)
                   #
OPTION:
```

Step 9: if you select 1 then deposit details is shown

```
DEPOSIT DETAILS
#
ACCOUNT NUMBER IS: 0
FULL NAME IS: Nima Dawa Sho
DEPOSIT DATE IS: 2021/7/20
DEPOSIT TIME IS: 19:36:20
BEFORE DEPOSIT BALANCE IS:
DEPOSIT AMOUNT IS: 500
CURRENT BALANCE IS: 6000
ACCOUNT NUMBER IS: 0
FULL NAME IS: Nima Dawa Sherpa
DEPOSIT DATE IS: 2021/7/20
DEPOSIT TIME IS: 19:40:42
BEFORE DEPOSIT BALANCE IS: 5500
DEPOSIT AMOUNT IS: 500
CURRENT BALANCE IS: 6000
ACCOUNT NUMBER IS: 1
FULL NAME IS: Subash Pandey
DEPOSIT DATE IS: 2021/7/20
DEPOSIT TIME IS: 19:40:55
BEFORE DEPOSIT BALANCE IS: 5003
DEPOSIT AMOUNT IS: 497
CURRENT BALANCE IS: 5500
ACCOUNT NUMBER IS: 1
FULL NAME IS: Subash Pandey
DEPOSIT DATE IS: 2021/7/20
DEPOSIT TIME IS: 22:25:25
BEFORE DEPOSIT BALANCE IS:
DEPOSIT AMOUNT IS: 7000
CURRENT BALANCE IS: 12000
                                                                         5000
ACCOUNT NUMBER IS: 1
FULL NAME IS: Subash Pandey
DEPOSIT DATE IS: 2021/7/20
DEPOSIT TIME IS: 22:34:46
BEFORE DEPOSIT BALANCE IS:
DEPOSIT AMOUNT IS: 400
CURRENT BALANCE IS: 11400
                                                                         11000
```

Step 10: if you select 2 then withdraw details is shown

Step 11: if you select 3 then goes back to main menu

Step 12: option 2 to 7 process are same as option 1.

Step 12: If you select option 8 and press enter you will go back to login menu

- Step 13: If you select option 3, then you will see this screen
- Step 14: If you press enter you will see this screen
- Step 15: Then your Password is recovered.
- Step 16: Press enter to return to login menu option

Step 17: If you Press 4, you will see this screen

```
Process returned 0 (0x0) execution time : 3.702 s
Press any key to continue.
```

Step 18: After that the Program is finished.