



Daffodil
International
University

Semester Project Fall 2022 (Theory Part)

Project Title: Mazumdar's Agro & Frisharies

Course Code: CIS115

Course Title: Structured Programming

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<u>TABLE OF CONTENTS:</u>	PAGE NO.
<i>ACKNOWLEDGEMENT</i>	3
<i>INTRODUCTION</i>	4
<i>TASK – 1</i>	5-7
<i>TASK – 1</i>	8-13
<i>TASK – 1</i>	14
<i>CONCLUSION</i>	15

ACKNOWLEDGEMENT

First and foremost, praise and thanks Allah, the Almighty, for His showers of blessings throughout my assignment work to complete the assignment successfully. As the completion of this assignment gave me much pleasure. Specially thanks to my course **teacher Abdullah Bin Kasem Bhuiyan** who gave me this semester's final assignment (**Mazumdar's Agro & Frisharies**). And I am very grateful to him because I have learned so many new things and stuff as a result of his assignment. I want to thank my parents because I was able to come to this world because of them. Thank you, Daffodil International University, from the bottom of my heart for giving me the opportunity to read about its environment and learn something new. I will dedicate this assignment to those who cannot tell or share their feelings with others, so they share with the code.

INTRODUCTION

The goal of this project is to make a responsive program that can keep record of the information relevant to poultry and fishery business of "MAZUMDER'S AGRO & FISHERIES". It will also have the option to generate reports based on loss-profit calculation. Overall, the target is to make the program functioning and as compact as possible following the guidelines of our course instructor. The document will include necessary pseudo code, flowchart diagrams, usable structures and mechanisms, and a requirement list to actualize the creation of the application.

• Login the system

Username: saidur

Password : 12345

Task-1 (A)

Following is the flowchart diagram for the project management :

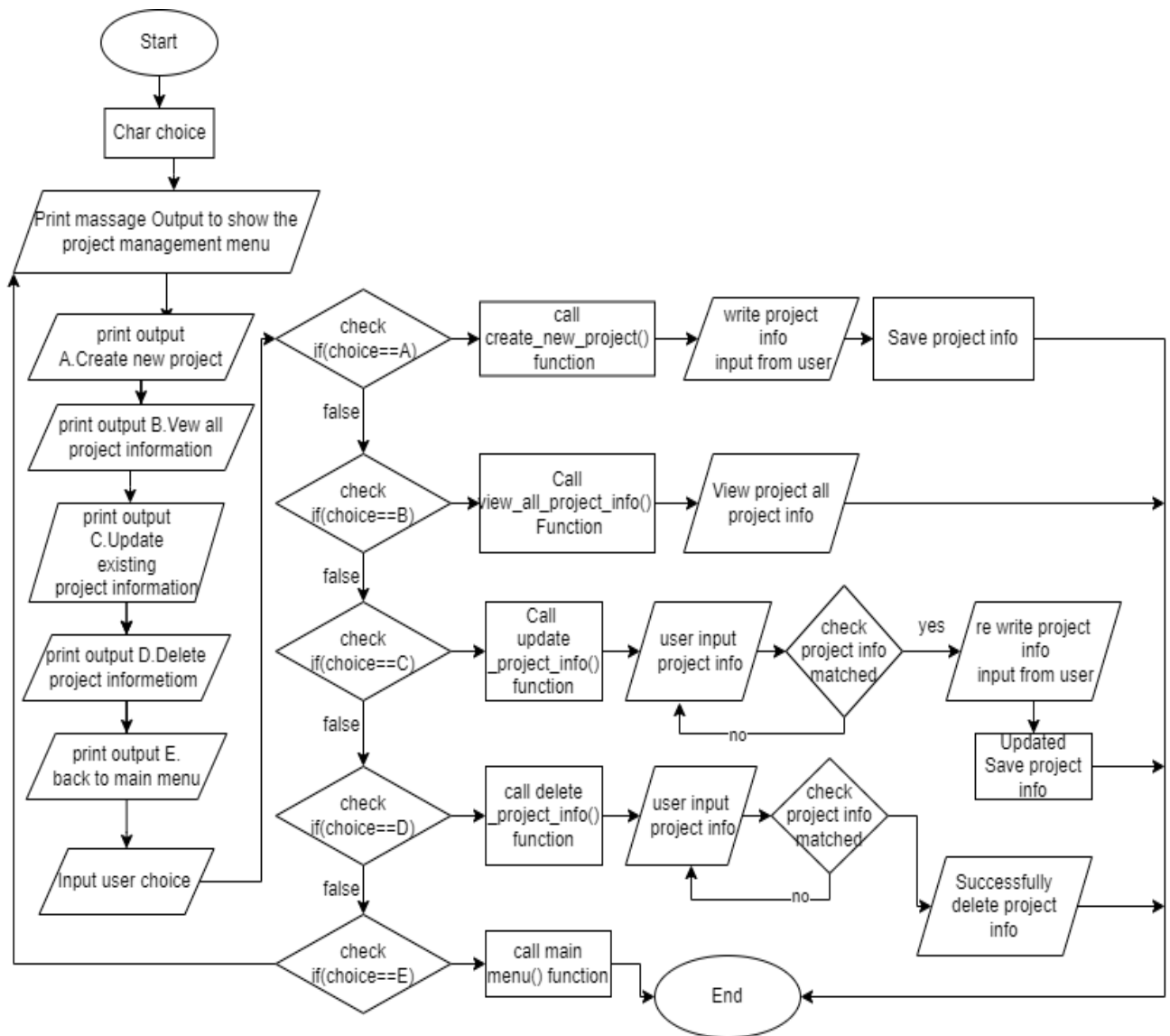


Figure: Flowchart Diagram for Project Management

Necessary Pseudo Code for Project Management :

Step 1: Start operation

Step 2: declare variable Char (choice)

Step 3: Output to show the project management menu

Step 4: take input from user;

Step 5: if (userChoice == A) == true

Step 6: call create_new_project() function

Step 7: write project info input from user

Step 8: Save project info

Step 9: else if (userChoice == B) == true

Step 10: Call view_all_project_info() Function

Step 11: View project all project info

Step 12: else if (userChoice == C) == true

Step 13: Call update _project_info() function

Step 14: take user input project info

Step 15: check project info matched,,if yes

Step 16: take updated project info from user

Step 17: rewrite updated info and saved project info

Step 18: else if (userChoice == D) == true

Step 19: call delete_project_info() function

Step 20:take projectId input form user

Step 21: check project info matched,,if yes

Step 22: Successfully delete project info and remove projectData.txt file

Step 23: else if (userChoice == E) == true

Step 24: call main menu() function

Step 25: else user has given invalid input

Step26: take user input again

Step27: End operation

Task-1 (B)

The flowchart diagram for the report generation process of loss-profit calculation of a specific project is given below:

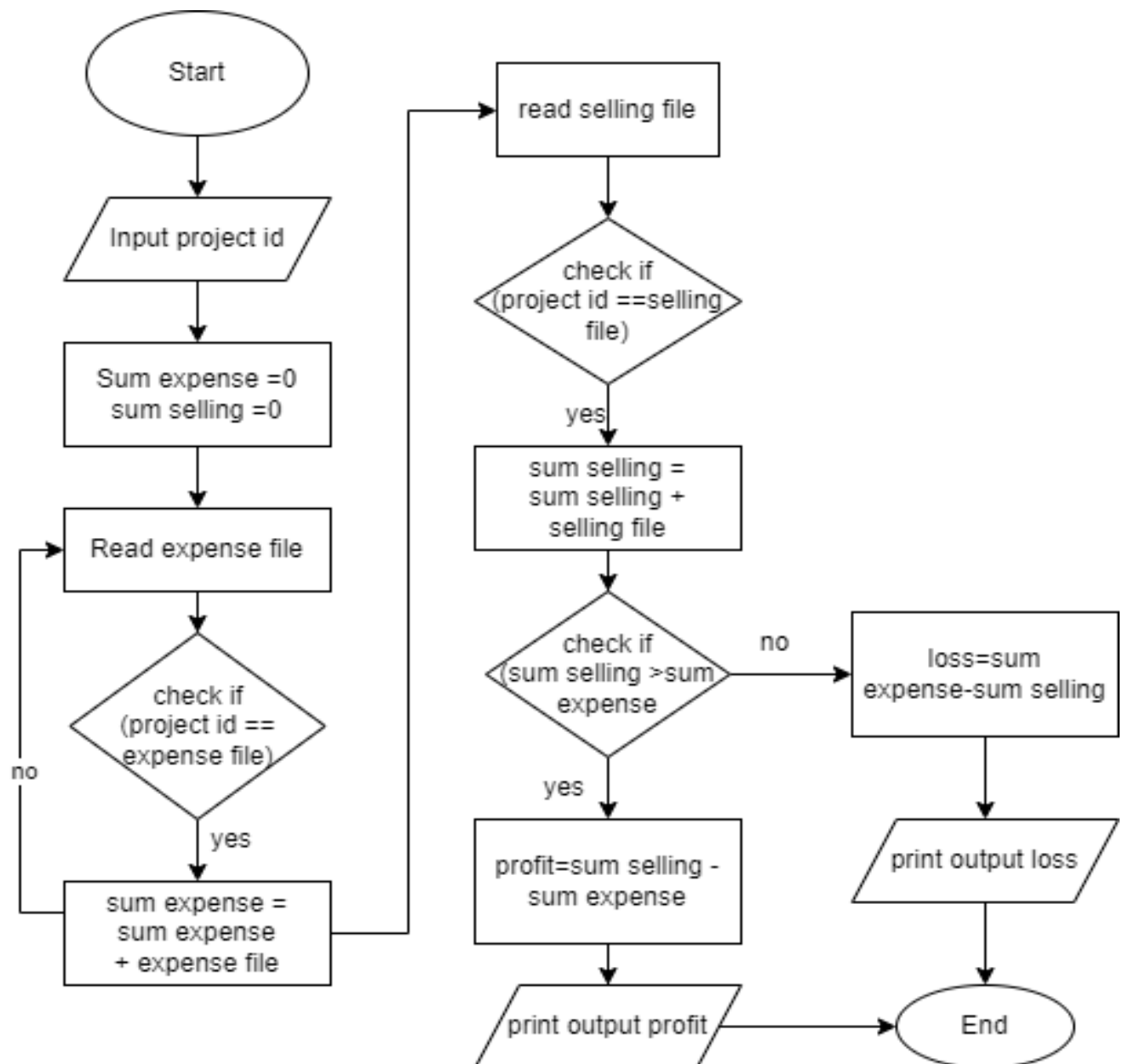


Figure: Flowchart Diagram for Project report generation process

Task-2 (A)

I have used Structure data structure and File input/output, Iteration, Conditional mechanisms to handle project history and reports.

Data Structures: To store the information of Projects, Expenses, Feeding History, Employees and Selling I have use Structure data structure, because in variables we can only store one data at a time and in array we can store multiple data but all data type should be same. To solve this issue, I have used Structure. I have also user Array data structure to store strings. For example: Project Name, project short des,,, Project type,start date,End date, Expense type etc.

```

50
51 //=====structure =====
52 struct Project{
53     int projectCode;
54     char projectId[20], projectName[50], projectShortDes[100], projectType[30], startDate[15], endDate[15];
55     float estimatedBudget;
56 };
57 struct expense{
58     int projectCode;
59     char expenseId[50];
60     char expenseDate[50], expenseType[50], productName[50], supplierInfo[100];
61     float expenseAmount;
62 };
63 struct feed
64 {
65     int projectCode;
66     float feedQuantity;
67     char feedId[50], feedDate[50], feedTiming[50], feedCatagory[100];
68 };
69 struct sell
70 {
71     int projectCode;
72     char sellingId[50], sellingDate[50], buyerInfo[50];
73     float sellProductQuantity, unitPrice, totalSellAmount;
74 };
75 struct employee
76 {
77     int projectCode;
78     char employeeId[50];
79     char employeeName[50];
80     char employeeAddress[50];
81     char employeeEmail[50];
82     int employeeNumber;
83     float employeeSalary;
84 };
85

```

Mechanisms: To check condition based on user input and to show output, I have used switch-case mechanism.

```

200
201 printf("\t\t-----MANAGE NEW FISH & POULTRY PROJECTS ==
202 printf("\n\n\xDB\xB2 A.CREATE NEW PROJECT INFO");
203 printf("\n\n\xDB\xB2 B.VIEW ALL PROJECT INFO");
204 printf("\n\n\xDB\xB2 C.UPDATE EXISTING PROJECT INFO");
205 printf("\n\n\xDB\xB2 D.DELETE A PROJECT");
206 printf("\n\n\xDB\xB2 E.BACK TO MAIN MENU");
207 label4:
208     printf("\n\n\xDB\xB2 CHOSE THE OPTION(A/B/C/D/E): ");
209
210     // Choose User Input
211     fflush(stdin);
212     scanf("%c", &subMenu_choice);
213     subMenu_choice = toupper(subMenu_choice);
214     switch (subMenu_choice)
215     {
216     case 'A':
217         createNewProject();
218         break;
219     case 'B':
220         viewAllProjectInfo();
221         break;
222     case 'C':
223         updateProjectInfo();
224         break;
225     case 'D':
226         deleteProjectInfo();
227         break;
228     case 'E':
229         printf("\nBack Successfully\n");
230         menu();
231         break;
232     default:
233         printf("\nInvalid Input!\nTry again!!\n");
234         goto label4;
235     }
236
237

```

For reading data and to show output to the user I have used while-loop

Task-2 (B)

To build a program, we need a comprehensive requirement list to implement the required components. A well thought out plan is an effective way to progress. Here is the requirement list and guide on how to fulfil that list--

- a) Password to access.
- b) Manage all information like project info, expenses, selling, feeding history, and employee salary info etc.
- c) Store the information in files.
- d) Update various information from the stored files when needed.
- e) Delete an information info from the file.
- f) Generate project-wise total expense report.
- g) Show the feeding history of a specific project.
- h) Calculate the estimated price with a profit percentage.
- i) Generate the loss-profit report for a project. **Steps I have taken to full-fill the requirements:**

a) A user authentication system that will verify the user before allowing Username and Password access--

```

██████████ WELCOME TO MAZUMDAR'S AGRO & FRISHARIES ██████████
██████████
██████ Do You Want To Login -----??
██████ 1. Yes I Want To Login
██████ 2. NO. I don't want To login
██████████
██████ Enter your Username : saidur
██████ Enter your Password : 12345
```

2) For the management part, user defined function for Manage Expenses, Manage Feed History, Manage Selling Info, Manage Employee Salary, Report generation will be included. Additionally, an option for Price estimation, Back to home and Exit will be made.

```

=====MAZUMDAR'S AGRO & FRISHARIES ADMIN PANEL=====
1.MANAGE FISH OR POULTRY PROJECT
2.MANAGE EXPENSES
3.MANAGE FEED HISTORY
4.MANAGE SELLING INFO
5.MANAGE EMPLOYEE SALARY INFO
6.GENERATE REPORTS
7.MAKE A PRICE ESTIMATION
8.BACK TO HOME
9.EXIT
ENTER A TERM YOU WANT TO USE(1/2/3/4/5/6/7/8/9):

```

A submenu for each management will show up to take user inputs.

```

=====MAZUMDAR'S AGRO & FRISHARIES ADMIN PANEL=====
=====MANAGE NEW FISH & POULTRY PROJECTS=====
A.CREATE NEW PROJECT INFO
B.VIEW ALL PROJECT INFO
C.UPDATE EXISTING PROJECT INFO
D.DELETE A PROJECT
E.BACK TO MAIN MENU
CHOSE THE OPTION(A/B/C/D/E):

```

If user select B all the project list will be shown to the user

```
=====ALL PROJECT INFORMATION=====

PROJECT CODE   PROJECT ID   PROJECT TYPE   PROJECT NAME   PROJECT SHORT DESCRIPTION   Start Date   End Date   ESTIMATED BUDGET
1              1           Fish          fish 1         rfhgh                     01/01/2023   30/12/2023   500000.000

1.Project Menu
2.Main Menu
3. Exit
Enter Your Choose:
```

c) If the user chooses option A, a project creation menu will appear, allowing them to enter project details that will be stored in a file and saved.

```
=====MAZUMDAR'S AGRO & FRISHARIES ADMIN PANEL=====

===== PROVIDE ALL INFORMATION ABOUT THE PROJECT =====

Please Enter Project Type (Fish/Poultry): Fish
Please your Project id: 1
Please Enter Project Name/Title: fish 1
Please Provide Short Details About Projcet: rfhgh
Please Enter Project Start Date: 01/01/2023
Please Enter Project End Date: 30/12/2023
Please Enter the Estimated Budget: 500000

Successfully Saved

1.Do You Want To Add Another new Project info?
0.Project Menu
Enter Your Choose:
```

d) If user chooses C in the sub menu project update function will be shown. The user wishes to change information after entering the project id.

```
##### UPDATE PROJECT INFORMATION #####

PLEASE ENTER PROJECT CODE YOU WANT TO MODIFY: 1

#####-----PROVIDE ALL THE NECESSARY INFORMATION ABOUT THE PROJECT-----#####

Please Enter Project Type (Fish/Poultry): Big Fish
Enter the project ID: 1
Please Enter Project Name/Title: fish
Please Provide Short Details About Projcet: drd
Please Enter Project Start Date:
```

Afterwards, the user can re-enter all the information.

e) To delete a project data user, have to select D in the submenu.

```

ENTER THE PROJECT CODE YOU WANT DELETE: 1
project information delete successfully

1.DO YOU WANT TO DELETE ANOTHER PROJECT INFO?
2.PROJECT MENU
3.MAIN MENU
Enter your choice: |

```

In this way from sub menus user can create, view, update and delete any information of a specific Project, Expense, Sells, Feeding history, and Employee.

f) To Generate Report of a project user, have to select 6 in the main menu and have to give the project id in the input field.

```

=====MAZUMDAR'S AGRO & FRISHARIES ADMIN PANEL=====
----- WELCOME TO REPORT GENERATION INTERFACE -----

PLEASE ENTER THE PROJECT CODE THAT YOU WANT TO GENERATE REPORT: 1
----- REPORT GENETARION INFORMATION -----

PROJECT CODE: 1
THE TOTAL EXPENSE OF THIS PROJECT: 100000.000 KG
THE TOTAL FEED WERE GIVEN TO THIS PROJECT: 10000.000 KG
THE TOTAL SELL OF THIS PROJECT: 150000.000
THE PROJECT HAS MADE INCURRED PROFIT: 50000.000 TK

1.DO YOU WANT TO GENERATE ANOTHER PROJECT REPORT?
2.MAIN MENU
3.EXIT PROGRAM ENTER THE CHOICE(1/2/3):

```

The project was relatively simple, and I made an effort to meet all the goals while maintaining a better user experience.

Task-3 (A)

The project helped me a great deal on how to effectively use c functions and operator in a significant depth. Through the completion of this project, I was able to learn-

- Learn how to use the structure data structures and other c functions.
- How to store a or multiple structure in a file □ How to update a data in a file.
- How to copy data one file to another file, and delete a specific project info .
- How to read and write data in a file using c.
- Not to search how to solve the problem but also learn why the problem happening
- Dividing the problem into smaller tasks so that it's easier to handle and manage.

On the other hand, there are a lot of things that can be improved in the program. For Example:

-User Interface. The user interface as it is right now, is not the most convenient

-The disarrayed codes can be structured better. Modular programming offers that option to divide the program into separate modules.

-More information can be added to elevate the business data analysis. I would provide more options to enhance the variety of data and make the system for durable.

CONCLUSION

It was a good experience building a project like this. I was able to learn so many new functionalities of c. I would always appreciate my course instructor for guiding me through hard obstacles. There are still issues with my skill in terms of c programming but, with consistency I'd be able to elevate my work ethic and deliver more interesting and fluently responsive projects, insha'allah.