**SVKM’s NMIMS**

**Mukesh Patel School of Technology Management & Engineering**

Program: B.Tech, Sem II

A.Y. 2021 - 22

**Course: Data Structures and Algorithms**

**Project Report**

|  |  |  |
| --- | --- | --- |
| Name of the Project: | Groceria | |
|  | | |
| Details of Project Members |  |  |
| Batch | Roll No. | Name |
| I3 | I060 | Mohammad Adil Shaikh |
| I3 | I064 | Mohammed Az Syed |
| I3 | I070 | Chetan Yadav |
| Date of Submission: | | |

**Note:**

1. Create a readme file if you have multiple files
2. All files must be properly named (I004\_DSAProject)
3. All functions and variable should have proper names
4. The code must be properly commented.
5. Submit all relevant files of your work
6. **Plagiarism is highly discouraged**

**Rubrics for the Project evaluation:**

• **Program Correctness**: Program should work correctly on all inputs.

• **Code Elegance**: There are many ways to write the same functionality into your code, and some of them are needlessly slow or complicated. For example, if you are repeating the same code, it should be inside creating a new method/function or for loop.

• **Readability**: Variables and functions should have meaningful names. Code should be organized into functions/methods where appropriate. There should be an appropriate amount of white space so that the code is readable, and indentation should be consistent.

• **Documentation**: Your code and functions/methods should be appropriately commented. However, not every line should be commented because that makes your code overly busy. Think carefully about where comments are needed.

. • **Viva** – Student should be able to explain the logic of the project and answer relevant questions

A.1 **Aim of the Project/ Problem Statement:** To optimize the grocery delivery system and provide an immersive user experience

A.2 **Application /Usefulness of the Problem statement chosen:** Useful for any online retail purposes

A.3 **Description of Project:**

We have made a linked list-based database for user management and inventory management, implemented a stack using linked lists to replicate the actual shopping cart experience and used graphs to find the minimum distance between source and destination. We have used a menu-driven approach to make it interactive and user friendly.

**If your assignment has multiple modules explain each module in detail**

A.5 **Contribution of each project Members:**

|  |  |  |
| --- | --- | --- |
| Roll No. | Name: | Contribution |
| I060 | Mohammad Adil Shaikh | Graph, login and error rectification |
| I064 | Mohammed Az Syed | Menu-driven program, prototyping and stack application |
| I070 | Chetan Yadav | Database module and beta testing |

A.6 **Learning from the Project:**

Learned how to implement useful data structures like a linked list, stack and graphs. The usefulness of Dijkstra's algorithm. Implemented a real-life application of data structures.

A.7 **Challenges you faced while doing the Project**

Buggy IDEs, lengthy code, aesthetics in the terminal, scheduling difficulties.

A.9 **Conclusion:**

Understood the theoretical concepts of data structure and algorithms more clearly due to practical implementation