

**Module Code & Module Title**

**CS6004NI – Application Development**

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**Assignment Submission Date:**

*I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.*

Table of Content

[1. Introduction 1](#_Toc102837495)

[2. Detail Instruction to Run the Program 3](#_Toc102837496)

[3. Architecture of the System 4](#_Toc102837497)

[4. Detailed Description of the Classes’ Properties and Method 5](#_Toc102837498)

[5. Testing 6](#_Toc102837499)

[5.1. Test 1 6](#_Toc102837500)

[5.2. Test 2 7](#_Toc102837501)

[5.3. Test 3 8](#_Toc102837502)

[5.4. Test 4 9](#_Toc102837503)

[5.5. Test 5 10](#_Toc102837504)

[5.6. Test 6 11](#_Toc102837505)

[5.7. Test 7 12](#_Toc102837506)

[5.8. Test 8 13](#_Toc102837507)

[5.9. Test 9 14](#_Toc102837508)

[5.10. Test 10 15](#_Toc102837509)

[6. Conclusion 17](#_Toc102837510)

[7. Bibliography 18](#_Toc102837511)

**Table of Figures**

**No table of figures entries found.**

**Table of Tables**

[Table 1: Test no.1 6](#_Toc102837634)

[Table 2: Test no.2 7](#_Toc102837635)

[Table 3: Test no.3 8](#_Toc102837636)

[Table 4: Test no.4 9](#_Toc102837637)

[Table 5: Test no.5 10](#_Toc102837638)

[Table 6: Test no.6 11](#_Toc102837639)

[Table 7: Test no.7 12](#_Toc102837640)

[Table 8: Test no.8 13](#_Toc102837641)

[Table 9: Test no.9 14](#_Toc102837642)

[Table 10: Test no.10 15](#_Toc102837643)

# Introduction

The assigned project calls for the development of an application in a collaborative manner to support a company named Ropey DVDs. Ropey DVDs is a franchise DVD rental store chain in which several shops operate under a common name with shared purchasing and advertising yet function as distinct businesses.

Per the company's needs, the application in issue should provide a number of features. It should be able to manage the stock, loaning, and return of DVDs to its members who require such services. Moreover, each DVD should have the records of the main actors, as well as the studio and producer of the DVD.

There have also been some assumptions stated that must be followed during the development of this application. To begin, it is assumed that a single DVD can only have one producer and be linked with one studio. Aside from that, each DVD has been labeled with a genre and whether or not it is appropriate for audiences under the age of 18. Furthermore, each business maintains a list of members who are the only ones who are permitted to borrow DVDs. Each member, however, is assigned to a member category, which restricts how many DVDs they may loan at one time. Whenever a DVD is loaned, a record has to be created that includes information on the member who borrowed the DVD as well as how long they may retain the DVD without incurring any financial penalties.

A variety of tools were utilized in the development of this application. Visual Studio 2022 has been used for development.

Microsoft's Visual Studio is an Integrated Development Environment (IDE) used to create GUIs (Graphical User Interfaces), console, web applications, mobile apps, cloud and online services, and so on (Microsoft, 2022; geeksforgeeks, 2019).

As for version control of the development process, Git and GitHub have been used. Git is a free and open-source distributed version control system that can manage everything from modest to extremely large projects with efficiency and ease (Git, 2022). Likewise, GitHub provides Git-based Internet hosting for software development and version control. It provides Git's distributed version control and source code management (SCM) functions, as well as its own features. For each project, it provides access control as well as various collaboration tools such as bug tracking, feature requests, task management, continuous integration, and wikis (Williams, 2012).

Going further, the report documents the development process of the application from beginning to end, along with the tasks assigned to each individual member of the group.

# Detail Instruction to Run the Program

# Architecture of the System

# Detailed Description of the Classes’ Properties and Method

# Testing

Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Defect free. (Hamilton, 2022) Any software developer's ultimate goal is to create apps that are fast, stable, and simple to use. Each application must be properly tested in order to achieve this goal.

## Test 1

|  |  |
| --- | --- |
| **Test No.1** | |
| Objective | To run the program. |
| Action | The run button in the Visual Studio 2022 was clicked. |
| Expected Output | The program would run successfully. |
| Actual Output | The program was successfully. |
| Result | The test was successful. |

Table : Test no.1

## Test 2

|  |  |
| --- | --- |
| **Test No.2** | |
| Objective | To login the admin. |
| Action | The Login button was pressed and the valid credentials were entered. |
| Expected Output | The user would be logged in successfully. |
| Actual Output | The user was logged in successfully. |
| Result | The test was successful. |

Table : Test no.2

## Test 3

|  |  |
| --- | --- |
| **Test No.3** | |
| Objective | To view list of DVD on Loan in order by date out. |
| Action | The 'Return' Button in the DVD section of the admin dashboard was clicked. |
| Expected Output | A list of DVD that are currently on loan and not returned would be shown in order by Date out. |
| Actual Output | A list of DVD that are currently on loan and not returned was shown in order by Date out. |
| Result | The test was successful. |

Table : Test no.3

## Test 4

|  |  |
| --- | --- |
| **Test No.4** | |
| Objective | To search details of the loan by copy number. |
| Action | The copy number was entered in the DVD Return page and the search button was clicked. |
| Expected Output | The details of the copy number would be shown. |
| Actual Output | The details of the copy number was shown. |
| Result | The test was successful. |

Table : Test no.4

## Test 5

|  |  |
| --- | --- |
| **Test No.5** | |
| Objective | To return the DVD with price calculation. |
| Action | The 'Return' button of the DVD to be returned was clicked and the 'Save' button was clicked. |
| Expected Output | The price would be calculated and the DVD would be returned. |
| Actual Output | The price was calculated and the DVD was returned. |
| Result | The test was successful. |

Table : Test no.5

## Test 6

|  |  |
| --- | --- |
| **Test No.6** | |
| Objective | To change password. |
| Action | The current password, new password and confirm new password were entered and the Update button was clicked, |
| Expected Output | The password would be updated. |
| Actual Output | The password was updated. |
| Result | The test was successful. |

Table : Test no.6

## Test 7

|  |  |
| --- | --- |
| **Test No.7** | |
| Objective |  |
| Action |  |
| Expected Output |  |
| Actual Output |  |
| Result | The test was successful. |

Table : Test no.7

## Test 8

|  |  |
| --- | --- |
| **Test No.8** | |
| Objective |  |
| Action |  |
| Expected Output |  |
| Actual Output |  |
| Result | The test was successful. |

Table : Test no.8

## Test 9

|  |  |
| --- | --- |
| **Test No.9** | |
| Objective |  |
| Action |  |
| Expected Output |  |
| Actual Output |  |
| Result | The test was successful. |

Table : Test no.9

## Test 10

|  |  |
| --- | --- |
| **Test No.10** | |
| Objective |  |
| Action |  |
| Expected Output |  |
| Actual Output |  |
| Result | The test was successful. |

Table : Test no.10

# Conclusion

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