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Faculty of Computer Science and Information Technology

Assignment/Report Cover Sheet

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Assignment Title :	GROUP PROJECT	Lecturer:	MOHAMAD JOHAN BIN AHMAD KHIRI
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I also certify that I have taken proper care in safeguarding my work and have made all reasonable efforts to ensure that my work not be able to be copied.

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1.0 Introduction

The Movie Ticketing System is a console-based application designed to simulate a real-world ticket dispensing environment for a Cinema. This system serves as a practical application of fundamental programming concepts. The system is designed to handle ticket purchases for different customer categories, including Family and Individual tickets, with additional options such as VIP seating and Food and Beverage coupons. The program calculates ticket prices automatically and generates a receipt for each transaction

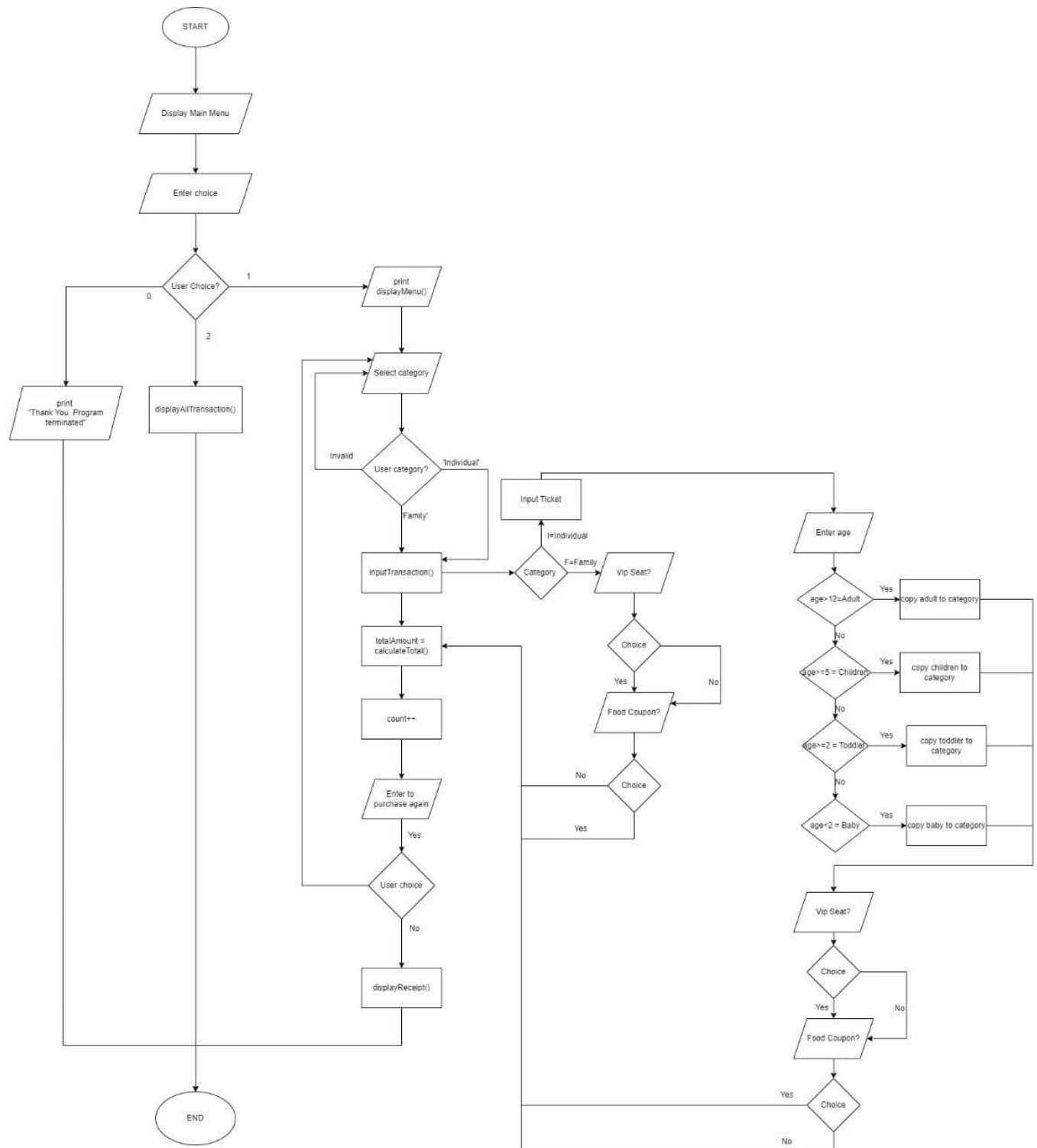
The system is implemented using a command-line interface that provides a streamlined and user-friendly interaction for managing movie ticket purchases. Users are able to select ticket categories, apply optional services such as VIP seating upgrades and Food and Beverage coupons, and receive accurate and well-formatted receipts upon completion of each transaction. Furthermore, the system incorporates file handling to store transaction records permanently, allowing users to retrieve and view transaction history even after the program is closed. By applying structured programming techniques, this project demonstrates the practical use of core C programming concepts while providing a functional solution for managing movie ticket transactions.

2.0 Objectives

The development of this system aims to demonstrate core competencies in software construction and problem-solving. The specific objectives are to:

- **Develop a Functional Console Program:** Create a bug-free interface that effectively receives user inputs and displays correct ticketing information and receipts.
- **Implement Modular Programming:** Utilize functions to break down the system into manageable components, demonstrating the ability to pass arguments and return values between modules.
- **Utilize Derived Data Types:** Manage complex data effectively by applying structures, arrays, or pointers to organize ticket and customer information.
- **Apply File Operations:** Demonstrate the ability to perform persistent data storage by saving all transaction history to a **.txt or .dat file** for future auditing.

3.0 Flowcharts



4.0 User Manual

```

===== MOVIE TICKETING SYSTEM =====
1. New Transaction 1
2. View Transaction History 2
0. Exit 3
Enter choice:

```

FEATURES

- **Type [1]** - Start a process to book and purchase tickets
- **Type [2]** - Display all past ticket sales and transactions
- **Type [0]** - To ensure all data is saved correctly, always exit using the menu

4.1 Individual User Manual

```

===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

===== Movie Ticketing Details =====
Category | Ticket(RM) | VIP seat(RM) | Food and drink(RM)
-----|-----|-----|-----
Family | 2 Adults | 30.00 | 40.00 | 20.00
      | 2 children | per family | per family | per family
-----|-----|-----|-----
Individual|Adults | 10.00 | 12.00 | 8 per pax
      | children | 6.00 | 8.00 | 6 per pax
      | per person | per person | per person |
-----|-----|-----|-----

Select category (F - Family | I - Individual): I
Number of tickets (max 5): 1
Ticket #1
Enter age: 2
VIP Seat? (1-Yes 0-No): 3
Food Coupon? (1-Yes 0-No): 4
Do you want to make another purchase? (Y - Yes | N - No): N 5

===== RECEIPT =====
ID NO: 0002
Category | Quantity | Amount
-----|-----|-----
Adult | 1 | RM 20.00
TOTAL PRICE
Thank you for your purcha
All data saved to transactions.txt

```

FEATURES

If you select the **Individual (I)** category,

1. **Number of tickets:** Enter how many tickets you wish to buy (Maximum of 5)
2. **Enter age:** The system uses age to determine if the ticket is for an **Adult** or **Children**
3. **VIP Seat:** Selecting VIP seats for upgrade
4. **Food Coupon:** For adding the food package
5. **Add more purchase:** You will be asked if you want to make another purchase (Y/N).

After completing the prompts, a receipt is generated containing:

- **ID NO:** A unique transaction identifier
- **Category & Quantity:** Breakdown of the tickets purchased.
- **Total Price:** The final sum of all tickets, seat upgrades, and food coupons.
- **Data Confirmation:** A message confirming that "All data saved to transactions.txt".

4.2 Family User Manual

```

===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
3. Exit
Enter choice: 1

Movie Ticketing Details
-----
Category | Ticket(RM) | VIP seat(RM) | Food and drink(RM)
-----
Family | 12 Adults | 10.00 | 40.00 | 20.00
      | 2 Children | 10.00 | 12.00 | 8 per pax
-----
Individual | 10.00 | 12.00 | 8 per pax
      | 10 Children | 6.00 | 8.00 | 6 per pax
-----

Select category (F - Family | I - Individual): F
Purchase for family VIP seat? (1- YES | 0- NO):
Add Food Coupon for the family? (1 - Yes | 0 - NO):
Do you want to make another purchase? (Y - Yes | N - No): N

===== RECEIPT =====
ID NO: 0003
Category | Quantity | Amount
-----
Family | 12 | 10.00
      | 2 | 12.00
      | 10 | 60.00
      | 2 | 16.00
TOTAL PRICE: 98.00
Thank you for your purchase!
All data saved to transactions.txt

```

FEATURES

If you select the **Family(F)** category:

1. **Ticket Category:** Enter 1 for Yes or 0 for No. This provides VIP seating for the entire family.
2. **Food coupon:** Enter 1 for Yes or 0 for No to add a food coupon for the family.
3. **Session Completion:** The system will ask if you wish to make another purchase. Enter **N** to finalize the transaction and view the family receipt.

Once the purchase is finalized, the system generates a receipt specifically for the family session:

- **ID NO:** A unique number transaction identifier
- **Total Price:** The final sum of the base ticket and any selected add-ons is displayed.
- **Data Confirmation:** A message confirms "All data saved to transactions.txt" indicating the family record has been permanently logged.

4.3 History Transaction and Termination

```

===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
3. Exit
Enter choice: 2 1

===== TRANSACTION HISTORY =====
Receipt No. | Category | Qty | VIP Seat | Food/Drink | Amount(RM)
-----
0001 | Individual - Adult | 1 | 1 | 1 | 20.00
      | Family Package | 1 | - | 1 | 50.00
      | Total : | 70.00
-----
0002 | Individual - Adult | 1 | 1 | 1 | 20.00
      | Total : | 20.00
-----
0003 | Family Package | 1 | - | 1 | 50.00
      | Total : | 50.00
-----

===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
3. Exit
Enter choice: 0 2
Thank you. Program terminated.

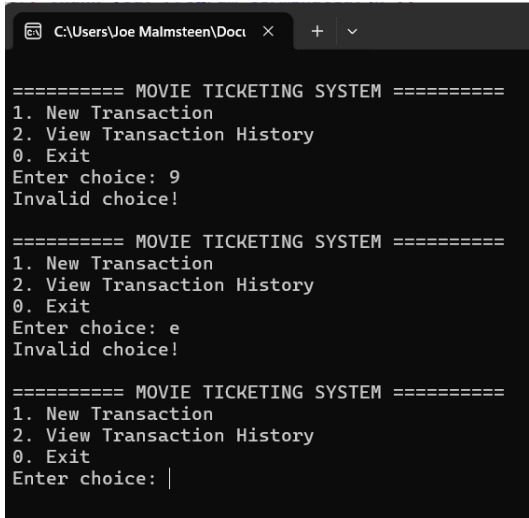
Process exited after 975.7 seconds with return value 0
Press any key to continue . . .

```

FEATURES

- **Type [2] to view transaction history:** Access records of all previous ticket sales saved in the system
- **System generates a detailed receipt containing:**
 - The **Receipt No.** assigned to the sale.
 - The **Category** of tickets sold (Individual - Adult/Children or Family Package).
 - The status of **VIP Seats** and **Food/Drink** upgrades (indicated by '1' for yes or '-' for no).
 - The **Total Amount (RM)** for individual entries and the overall receipt total
- **Type [0] to Exit:** Close the application and terminate the program.

5.0 Output Screenshots

Output	Explanation
<p>1) Selecting the Menu with wrong inputs.</p>  <pre>===== MOVIE TICKETING SYSTEM ===== 1. New Transaction 2. View Transaction History 0. Exit Enter choice: 9 Invalid choice! ===== MOVIE TICKETING SYSTEM ===== 1. New Transaction 2. View Transaction History 0. Exit Enter choice: e Invalid choice! ===== MOVIE TICKETING SYSTEM ===== 1. New Transaction 2. View Transaction History 0. Exit Enter choice: </pre>	<ul style="list-style-type: none">• This shows when the user enters the wrong input. First, the user entered the number '9', which is not an option on the menu and received an 'Invalid choice!' message.• Then, the user asked to re-enter again, but the user entered the letter 'e' by mistake again which is also not an option on the menu.
<p>2) Selecting the Ticket Category with wrong inputs.</p>	<ul style="list-style-type: none">• When the user enter the letter 'y' by mistake, the program immediately caught the error and displayed an


```

C:\Users\Joe Malmsteen\Docu x + v
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

=====
Movie Ticketing Det
=====
Category | Ticket(RM) |
-----|-----|
Family |2 Adults |30.00 |40.00
-----|-----|
|2 Children |per family |per
-----|-----|
Individual|Adults |10.00 |12.00
| |per person |per
-----|-----|
|Children |6.00 |8.00
| |per person |per
-----|-----|

Select category (F - Family | I - Individual): y
Invalid category! Try again.
Select category (F - Family | I - Individual): |

```

error message and give the user another chance to enter the correct category.

3) The user selecting the VIP seat and food coupon with wrong inputs.

```

C:\Users\Joe Malmsteen\Docu x + v
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

=====
Movie Ticketing Deta
=====
Category | Ticket(RM) |
-----|-----|
Family |2 Adults |30.00 |40.00
-----|-----|
|2 Children |per family |per
-----|-----|
Individual|Adults |10.00 |12.00
| |per person |per
-----|-----|
|Children |6.00 |8.00
| |per person |per
-----|-----|

Select category (F - Family | I - Individual): f
Purchase for Family VIP seat? (1- YES | 0- NO): 2
Invalid Input. Please enter again!
Purchase for Family VIP seat? (1- YES | 0- NO): |

```

- However, when asked about the VIP Seat upgrade, the user enters '2', which triggers an error message because there is only '1' or '0' option.

```

C:\Users\Joe Malmsteen\Docu x + v
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

=====
Movie Ticketing Detail
=====
Category | Ticket(RM) |
-----|-----|
Family | 2 Adults | 30.00 | 40.00
| | per family | per f
| 2 Children | |
-----|-----|
Individual|Adults | 10.00 | 12.00
| | per person | per p
|Children | 6.00 | 8.00
| | per person | per p
-----|-----|

Select category (F - Family | I - Individual): f
Purchase for Family VIP seat? (1- YES | 0- NO): 1
Add Food Coupon for the family? (1 - YES | 0 - NO): 7
Invalid Input. Please enter again!
Add Food Coupon for the family? (1 - YES | 0 - NO): |

```

- Same goes when the user enters the same mistake by enters number '7' which is out of option and an error message displayed and asks the user to select again until the value is true.

4) The user selecting the wrong inputs when trying to make another purchase.

```

C:\Users\Joe Malmsteen\Docu x + v
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

=====
Movie Ticketing Details
=====
Category | Ticket(RM) | VIP
-----|-----|
Family | 2 Adults | 30.00 | 40.00
| | per family | per family
| 2 Children | |
-----|-----|
Individual|Adults | 10.00 | 12.00
| | per person | per person
|Children | 6.00 | 8.00
| | per person | per person
-----|-----|

Select category (F - Family | I - Individual): f
Purchase for Family VIP seat? (1- YES | 0- NO): 1
Add Food Coupon for the family? (1 - YES | 0 - NO): 0
Do you want to make another purchase? (Y - Yes | N - No): j
Invalid input! Please enter Y or N.
Do you want to make another purchase? (Y - Yes | N - No): |

```

- The user is asked if they want to make another purchase and the user enters letter 'j' as thos does not match the required 'Y' and 'N' options.
- Then an error message is displayed and re-enter the user for a correct response.

5) The user enter the correct input (“1”).

```

C:\Users\User\Downloads\tict >
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 1

===== Movie Ticketing Details =====
Category | Ticket(RM) | VIP seat(RM) | Food and drink(RM)
-----
Family | 2 Adults | 30.00 | 40.00 | 20.00
| | |per family |per family |per family
| 2 Children | | |
Individual | 1 Adults | 10.00 | 12.00 | 8 per pas
| | |per person |per person |
| 1 Children | 6.00 | 8.00 | 6 per pas
| | |per person |per person |

Select category (F - Family | I - Individual): F
Purchase for Family VIP seat? (1- YES | 0- NO): 1
Add Food Coupon for the family? (1- YES | 0- NO): 1
Do you want to make another purchase? (Y - Yes | N - No): y
Select category (F - Family | I - Individual): f
Purchase for Family VIP seat? (1- YES | 0- NO): 1
Add Food Coupon for the family? (1- YES | 0- NO): 1
Do you want to make another purchase? (Y - Yes | N - No): n

===== RECEIPT =====
ID NO: 0004
=====
Category | Quantity | Amount
-----
Family | 1 | RM 90.00
Family | 1 | RM 90.00
TOTAL PRICE | | RM 180.00

Thank you for your purchase!
All data saved to transactions.txt

===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice:

```

Receipt No.	Category	Qty	VIP Seat	Food/Drink	Amount(RM)
0001	Family Package	1	1	1	90.00
	Family Package	1	1	1	90.00
				Total :	180.00

- Users enter the right input, and the program runs successfully. The system will display the receipt for users to see, and all information will be saved inside “transaction.txt” file.
- The system will also ask user to make a choice again.

6) The user enter the correct input ("2").

```
C:\Users\User\Downloads\tick > + v
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 2
===== TRANSACTION HISTORY =====
Receipt No. | Category | Qty | VIP Seat | Food/Drink | Amount(RM)
-----
0001 | Family Package | 1 | 1 | 1 | 90.00
      | Family Package | 1 | 1 | 1 | 90.00
      | Total : | | | | | 180.00
=====
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: |
```

- After the user entered the corrected input the user will see all transaction history.
- The transaction history will be include receipt number, category, quantity, vip seat or not ('1'=yes, '-'=no), Food/Drink or not ('1'=yes, '-'=no) and the total price of the ticket.
- The system will also ask user to make a choice again.

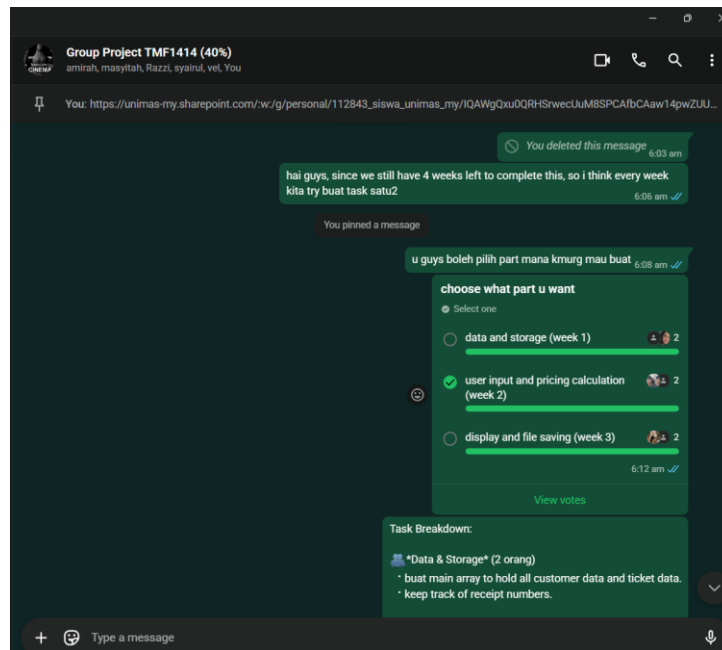
7) The user enter the correct input ("0").

```
C:\Users\User\Downloads\tick > + v
===== MOVIE TICKETING SYSTEM =====
1. New Transaction
2. View Transaction History
0. Exit
Enter choice: 0
Thank you. Program terminated.
=====
Process exited after 1.909 seconds with return value 0
Press any key to continue . . . |
```

- The system will exit and display "Thank you. Program terminated"

6.0 Proof of Discussion

- Task distribution:



- Task progress:

