






	<b>UNIVERSITI MALAYSIA SARAWAK</b>
	<b>Faculty of Computer Science and Information Technology</b>

### Assignment/Project/Report Cover Sheet

Student Name (G01)	Student ID Number	Group	Signature
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Course Code: TMT2673	Course Name: Object-Oriented Software Development	
Assignment Title: Object Oriented Software Development Group Project	Lecturer: Dr Tan Ping Ping	
Due Date: 3 <sup>rd</sup> January 2025 (5.00pm)	Date Submitted: 3 <sup>rd</sup> January 2025	

This cover sheet must be completed, signed and firmly attached to the front of the submission. All work must be submitted by the due date. If an extension of work is granted, an extension acknowledgement slip must be signed by the lecturer/tutor and attached to the assignment/project/report. Please note that it is your responsibility to retain copies of your assignment.

**Plagiarism and Collusion are methods of cheating that are addressed in the Peraturan Akademik Universiti Malaysia Sarawak para 11: Etika Akademik**

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#### Collusion

Collusion is the presentation of work that is the result in whole or in part of unauthorized collaboration with another person or persons.

Where there are reasonable grounds for believing that cheating has occurred, the only action that may be taken when plagiarism or collusion is detected is for the staff member not to mark the item of work and to report or refer the matter to the Dean. This may result in work being disallowed and given a fail grade or if the circumstances warrant, the matter may be referred to a Committee of inquiry for investigation. Such investigation may result in the matter being referred to the University Discipline Committee, which has the power to exclude a student.

**Upon placing signature above, I certify that I have not plagiarized the work of others or participated in unauthorized collusion when preparing this assignment.**

**I also certify that I have taken proper care in safeguarding my work and have made all reasonable efforts to ensure that my work is not able to be copied.**

**MARK :**

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## INTEGRITY DECLARATION FORM

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ACTION THAT SHALL BE TAKEN AGAINST ME.**

**SIGNED BY** : 

**NAME** : ALBERTINA NGU YAN SI

**MATRIC NO** : 98025

**COURSE** : TMT2673 OBJECT-ORIENTED SOFTWARE DEVELOPMENT

**COURSE INSTRUCTOR** : DR TAN PING PING

**ASSIGNMENT /  
ALTERNATIVE ASSESSMENT /  
TAKE HOME EXAM (MODULE  
NAME)** : OBJECT-ORIENTED SOFTWARE DEVELOPMENT GROUP  
PROJECT

**DATE** : 2<sup>nd</sup> January 2025

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CHAI HUI QING

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**COURSE**

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TMT2673 OBJECT-ORIENTED SOFTWARE DEVELOPMENT

**COURSE INSTRUCTOR**

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<b>SIGNED BY</b>	:	
<b>NAME</b>	:	ODILON CORINO ANAK JUNIT
<b>MATRIC NO</b>	:	100933
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<b>ASSIGNMENT / ALTERNATIVE ASSESSMENT / TAKE HOME EXAM (MODULE NAME)</b>	:	OBJECT-ORIENTED SOFTWARE DEVELOPMENT GROUP PROJECT
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<b>SIGNED BY</b>	:	
<b>NAME</b>	:	SAMUEL AGAL DICKY
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<b>COURSE</b>	:	TMT2673 OBJECT-ORIENTED SOFTWARE DEVELOPMENT
<b>COURSE INSTRUCTOR</b>	:	DR TAN PING PING
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**SIGNED BY** : 

**NAME** : WAN CAIREL AIMAN BIN WAN HABIB

**MATRIC NO** : 101313

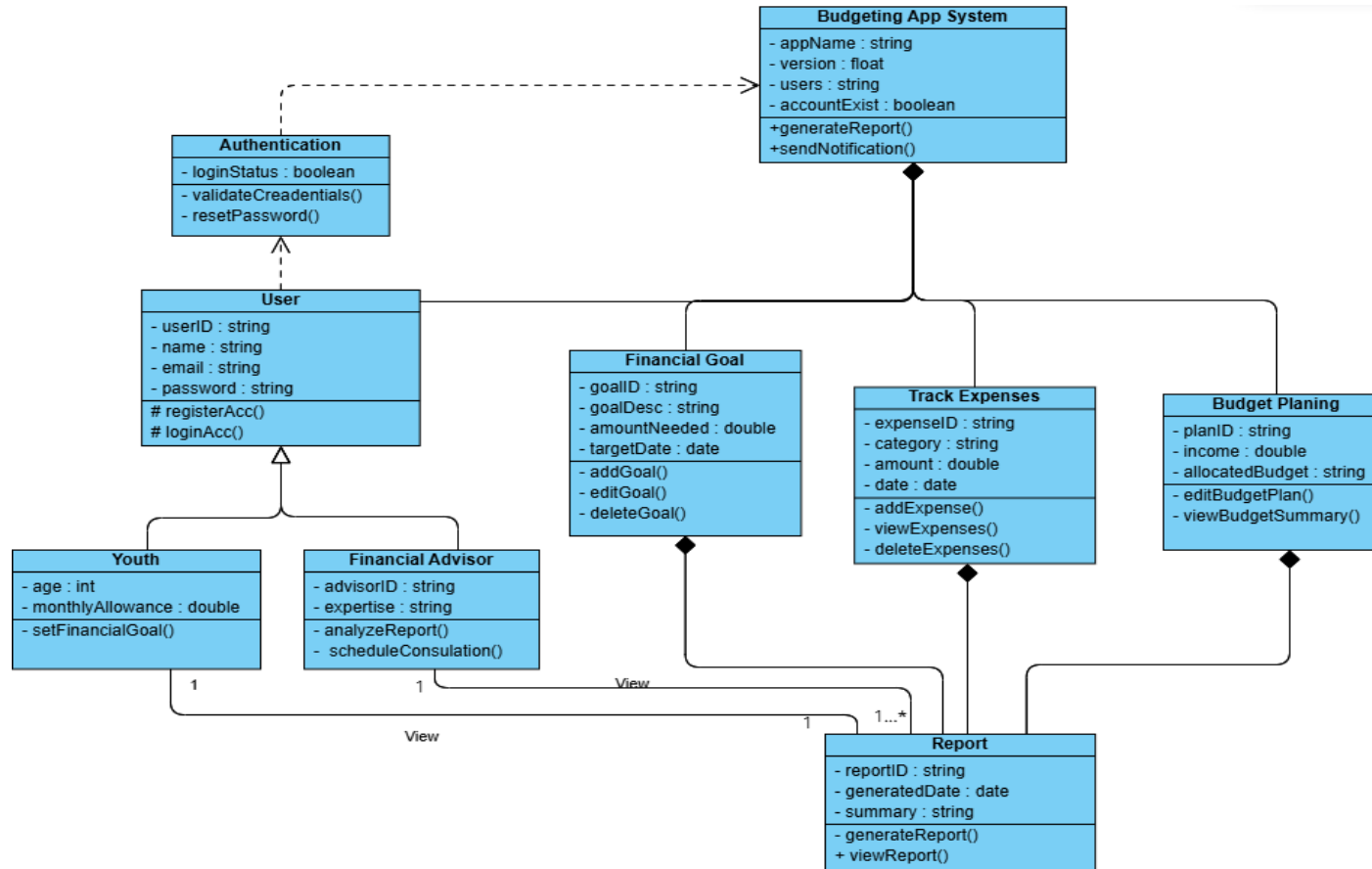
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## 1. Class Diagram



*Diagram 1: Class Diagram of Budgeting App*



The class diagram shows the Budgeting App System which design to help the youth to manage their finances efficiently. The system includes various interrelated classes with their roles and functionalities. The Budgeting App System is the main system class representing the overall application. It manages features such as generating reports and sending notification to user, ensuring smooth functionality. The youth attribute links the app system to individual User instances.

The User class are the individual users of the app where it stores essential information such as *userID*, *name*, *email* and *password*. The Youth class represents young user with attributes like age and monthly allowance. It allows setting financial goals and requesting financial advisors. The Financial Advisor class represents professionals offering financial advice. They can analyse reports and schedule consultation with users if needed. The Authentication class provides functions to validate user credentials and resetting passwords, ensuring secure access to the system.

The Financial Goal class allows users to set, edit, and delete financial goals. Each goal includes details like the goal description, required amount, and target date. Users can use this feature to plan their finances systematically. The Track Expenses class is responsible for managing expenses. It provides methods to add, view and delete expense record. This helps user to monitor their spending. The Budget Planning class focuses on budget management. Users can create or edit budget plans, allocate income to different categories and view summaries of their budget. Report class handles financial reports. Users can generate detailed reports and view summaries of their financial activities. It interacts closely with other classes like Track Expenses and Budget Planning to consolidate data.

The OO design principles is implemented by encapsulation. For example, in the diagram, attributes like *userID*, *password* and *goalID* are private and essential but sensitive, and is controlled through methods like *registerAcc()* and *loginAcc()* for the the User class. In the diagram also shows public and protected.

Inheritance is also one of the OO principles that is being implemented in the system. For example, Youth and Financial Advisor class are specialized subclasses of User, inheriting shared attributes and methods while adding specific functionalities like Youth adds attributes like *monthlyAllowance* and methods like *setFinancialGoal()*.

## 2. User Interface Design

```
=====
THE BUDGETER
=====
===== SIGN UP PAGE =====

FULL NAME : Samuel Agal Dicky
USER NAME : Sammy
PASSWORD : Password
SORRY THE PASSWORD YOU HAVE ENTERED IS NOT STRONG!
Password must be at least 8 characters and contain both letters and numbers.
```

Figure 1

Figure 1 shows the sign-up page for the user. As shown here, the password needs to be a strong password where it needs to be 8 characters long with letters and numbers. If it doesn't fulfil the requirements, thus an error message will appear.

```
=====
THE BUDGETER
=====
===== SIGN UP PAGE =====

FULL NAME : Samuel Agal Dicky
USER NAME : Sammy
PASSWORD : Password
SORRY THE PASSWORD YOU HAVE ENTERED IS NOT STRONG!
Password must be at least 8 characters and contain both letters and numbers.

PASSWORD : Password1
IC NUMBER : 123445-13-2345
EMAIL : oosd@gmail.com
CONTACT NO.: 0128565887
SALARY :
1. Inconsistent Salary
2. Fixed Salary
Choose: 2
Enter exact salary: 3000

Thank you! Redirecting you to your Account...
```

Figure 2

```
=====
THE BUDGETER
=====
===== DASHBOARD =====

Welcome Sammy!

1. Account
2. Financial Goal
3. Track Expenses
4. Budget Planning
5. View Report Summary
6. Book a Consultation
7. Log Out

Choose: █
```

Figure 3

When Users have already registered their account (Figure 2) a message will be shown to tell the user that they will be redirected to the dashboard (Figure 3).

```
=====
THE BUDGETER
=====
===== ACCOUNT =====

Sammy Account Info:

Name       : Samuel Agal Dicky
IC NUMBER  : 123445-13-2345
EMAIL      : oosd@gmail.com
CONTACT NO.: 0128565887
SALARY     : 3000.0

1. Back to Dashboard
2. Edit
```

Figure 4

When user choose “1” in Figure 3, it will show the user all the personal info that they have inputted when they register their account.

```
=====
THE BUDGETER
=====
===== FINANCIAL GOAL =====

1. Add Financial Goal
2. Edit Financial Goals
3. View Financial Goals
4. Delete Financial Goal
5. Generate Report
6. View Reports
7. Back to Dashboard
-----
Enter your choice: 3

===== Financial Goals =====
No.      Goal                Cost      Date
-----
1         Iphone 16          5000.0    12/12/24
2         Nike new shoes      500.0     14/04/25
-----

Press Enter to continue...
```

Figure 5

If User input “2” in Figure 3, it will redirect them to the Financial Goal page. Users need to add their goals in order to view their Financial Goal.

```
=====
THE BUDGETER
=====
===== CONSULTATION =====

1. Consultation History
2. Book a Consultation Appointment
3. Back to Dashboard
Choose: 2

===== Book Consultation =====
Explain your financial problem:
I lost my money bcs of my smoking addiction!

Date of consultation (DD/MM/YYYY): 04/01/2025
Time: 3pm

Thank you! Your slot is booked!

Press Enter to continue...|
```

*Figure 6*

When User wants to book a consultation appointment, they need to explain their problem, enter their preferred date and time of appointment and appointment is book.

### 3. Test Cases

Min 5 test. Please refer to the question for the example. **DON'T FOLLOW THE EXAMPLE PUNYA USE BCS THE QUESTION DOESN'T ALLOW IT**

Module	Test Case ID	Test Case Name	Created by	Date Created	Tested by	Precondition	Test Input	Actions	Expected output	Actual Output	Pass / Fail	Comments
Financial Goal	TC-1	Add Financial Goal	Chai (98426)	12/12/24	Sam (100933)	Successfully logged in	Enter goal, cost, date archive	Choose Financial Goal  Select Add Financial Goal  Enter goal details	Display the message for successfully added	Display the message: "Your goal 'name' added successfully with ID 'FG1'."	Pass	
Financial Goal	TC-2	Edit Financial Goal	Chai (98426)	12/12/24	Sam (100933)	Enter Financial Goal ID	Edit goal date	Enter ID :1  Choose 3 to edit date  Enter new date	Display the message for successfully edit	Display message: "New date update successfully."	Pass	

Report	TC-3	View Report	Chai (98426)	15/12/24	Sam (100933)	Generate report at Financial Goal	Enter :1 (report ID numeric as 1)	Choose View Report Summary from dashboard	Display report for Financial Goal, Expenses	Successfully display report for Financial Goal and Expenses	Pass	
Youth	TC-4	Book a Consultation	Albertina (98025)	15/12/24	Sam (100933)	Successfully logged in as youth	Problem description, date and Time	Choose consultation.  Book appointment.  Provide problem details.	Confirmation message: "Thank you! Your slot is booked! Press any key to go back."	Confirmation message displayed.	Pass	Test booking functionality.
Youth	TC-5	View Consultation History	Albertina (98025)	15/12/24	Sam (100933)	Successfully logged in as youth.	Consultation History	Navigate to Consultation, view history.	Displayed Consultation History.	Successfully displayed Consultation History.	Pass	Verifies the Consultation History display.
Budget	TC-8	Edit Budget Plan	Wan (101313)	26/12/24	Sam (100933)	Budget plan has been created	Set new budget plan	Budget Planning  Edit budget plan	Change the plan	Successfully change the budget plan	Pass	

Budget	TC-9	View Budget Plan	Wan (101313)	26/12/24	Sam (100933)	Budget plan has been created	Enter '3' to view	Budget Planning  View budget summary	Display the plan	Successfully displayed the budget plan	Pass	
--------	------	------------------------	-----------------	----------	-----------------	------------------------------------	----------------------	---	---------------------	--	------	--