UNIVERSITI TEKNOLOGI MARA
PERAK BRANCH, TAPAH CAMPUS
35400 Tapah Road

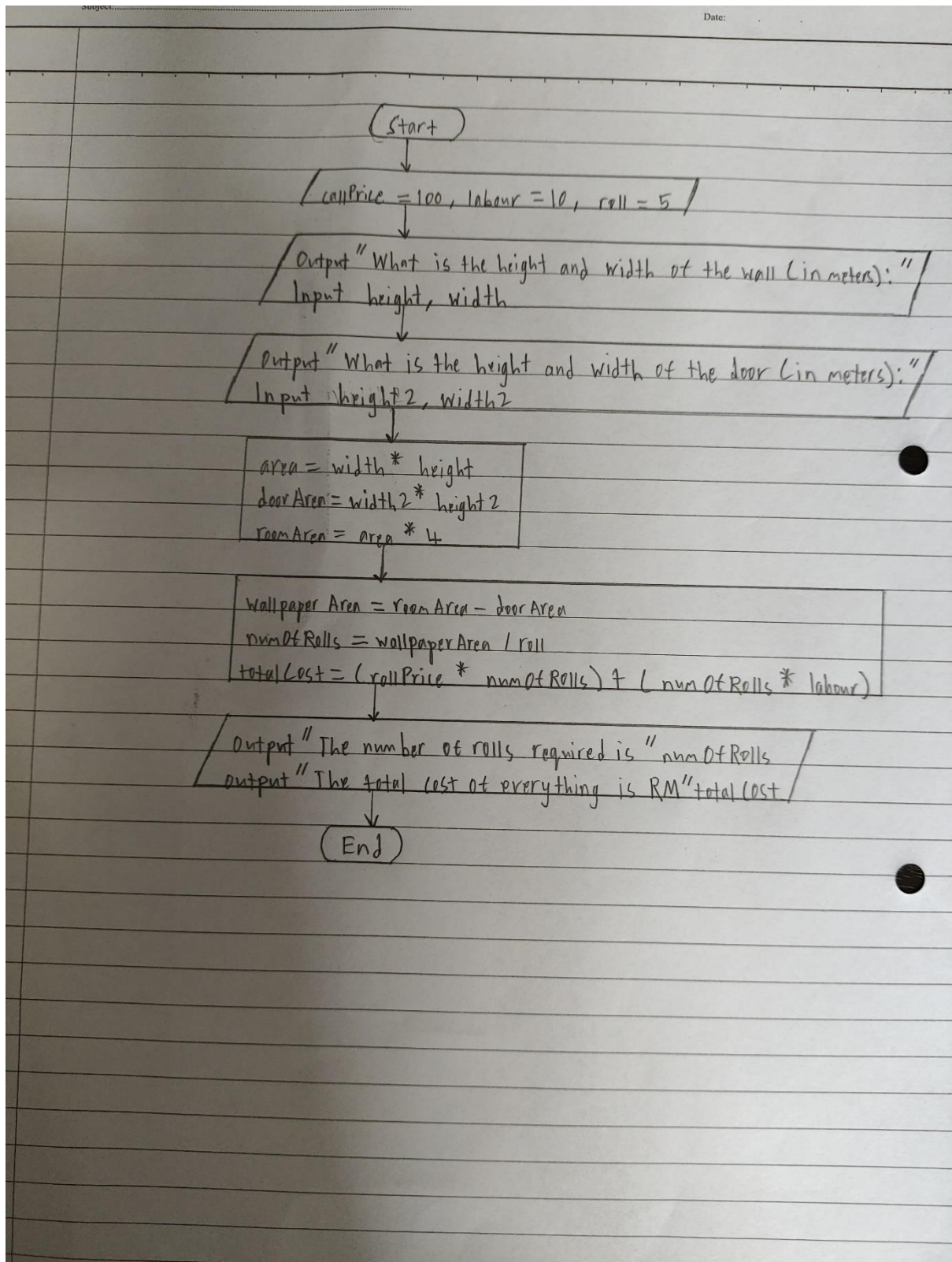# College of Computing, Informatics and Media

Fundamentals of Algorithms & Computer Problem Solving
(CSC126)

INDIVIDUAL ASSIGNMENT
(Assessment 2)

Prepared By :	Student Name: SHEIKH ADAM BAJUNID BIN MOHD FAISAL	Student ID : 2023135385
	Group: 1A	
Prepared For:	Lecturer's name: MOHD FAAIZIE BIN DARMAWAN	

Deadline: 14 June 2023, 5:00 PM

Question 1: Flowchart

```
                        ( Start )
                            |
                            v
        / rollPrice = 100, labour = 10, roll = 5 /
                            |
                            v
    / Output "What is the height and width of the wall (in meters): "
      Input height, width /
                            |
                            v
    / Output "What is the height and width of the door (in meters): "
      Input height2, width2 /
                            |
                            v
    | area = width * height
    | doorArea = width2 * height2
    | roomArea = area * 4
                            |
                            v
    | wallpaperArea = roomArea - doorArea
    | numOfRolls = wallpaperArea / roll
    | totalCost = (rollPrice * numOfRolls) + (numOfRolls * labour)
                            |
                            v
    / Output "The number of rolls required is " numOfRolls
      output "The total cost of everything is RM" totalCost /
                            |
                            v
                        ( End )
```

Question 1: Source Code

```
/*

Name                    : SHEIKH ADAM BAJUNID BIN MOHD FAISAL

Sid                     : 2023135385

Course                  : CSC126

Group                   : 1A

Due Date                : 14 June 2023 5:00 pm

Question No             : 1

Program Description      : This program is used to calculate the price and number of wallpaper rolls
required for Mr Rayyan

*/


#include <iostream>


using namespace std;


int main()
{
        double numOfRolls, area, height, width, height2, width2, doorArea, rollPrice = 100, labour =
10, roll = 5, wallpaperArea, roomArea, totalCost;


        cout<<"What is the height and width of the wall(in meters): ";

        cin>>height>>width;


        cout<<"What is the height and width of the door(in meters): ";

        cin>>height2>>width2;


        area = width * height;

        doorArea = width2 * height2;

        roomArea = area * 4;

        wallpaperArea = roomArea - doorArea;
```

```
numOfRolls = wallpaperArea / roll;

totalCost = (rollPrice * numOfRolls ) + (numOfRolls * labour);


cout<<"The number of rolls required is "<<numOfRolls<<endl;

cout<<"The total cost of everything is RM"<<totalCost;


return 0;


}
```
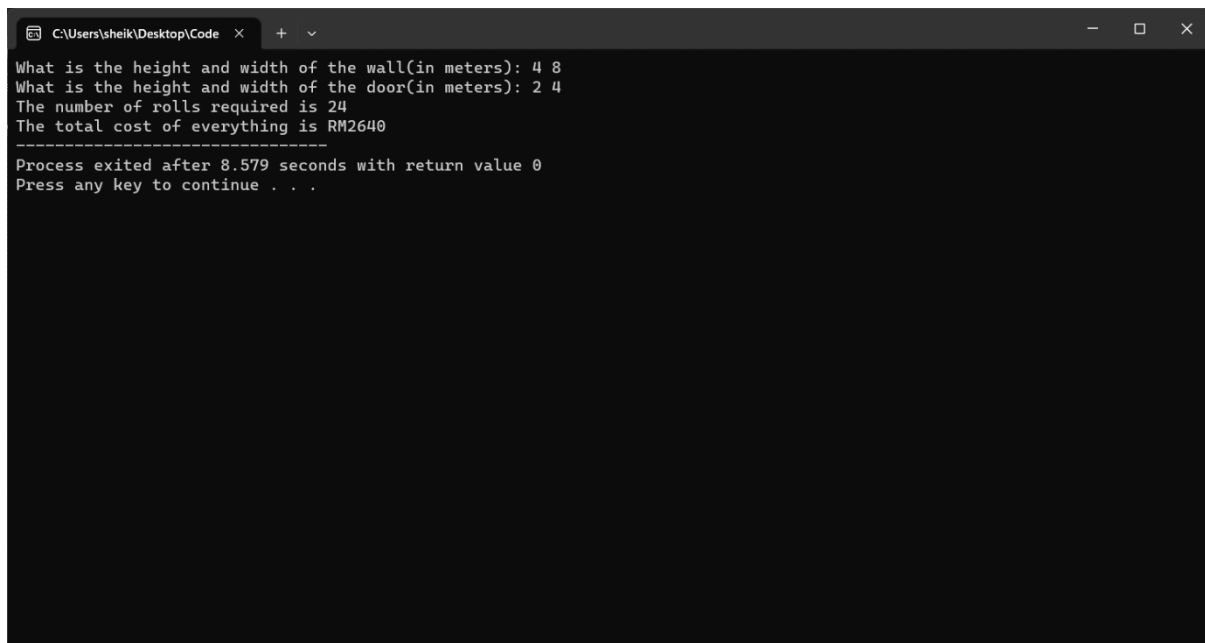
Question 1: Output Screenshot

Question 2: Source Code

```
/*

Name                    : SHEIKH ADAM BAJUNID BIN MOHD FAISAL

Sid                     : 2023135385

Course                  : CSC126

Group                   : 1A

Due Date                : 14 June 2023 5:00 pm

Question No             : 2

Program Description      : This program can calculate the final price for Bloom & Care while taking
into account the fact the person may have a membership and choose different package plans

*/


#include <iostream>

#include <string.h>

using namespace std;


int main()

{

        double pricePerHour, discount, totalPrice, hours;

        char membershipStatus[10], packageType[10];


        cout<<"Please enter your membership status of Bloom & Care (M for Member, N for Non-
member): ";

        cin>>membershipStatus;


        if (strcmp(membershipStatus, "M") == 0 || strcmp(membershipStatus, "m") == 0)

        {

                cout<<"There are 3 types of packages to choose from (G for Galaxy, S for Star and N
for Normal): ";

                cin>>packageType;


                strcpy(membershipStatus, "Member");
```

```cpp
                if (strcmp(packageType, "G") == 0 || strcmp(packageType, "g") == 0)
                {
                        pricePerHour = 70;
                        discount = 23;
                        strcpy(packageType, "Galaxy");
                }
                else if (strcmp(packageType, "S") == 0 || strcmp(packageType, "s") == 0)
                {
                        pricePerHour = 45;
                        discount = 20;
                        strcpy(packageType, "Star");
                }
                else if (strcmp(packageType, "N") == 0 || strcmp(packageType, "n") == 0)
                {
                        pricePerHour = 30;
                        discount = 15;
                        strcpy(packageType, "Normal");
                }
                else
                {
                        cout<<"Invalid type of package or package code";
                        return 0;
                }

        }
        else if (strcmp(membershipStatus, "N") == 0 || strcmp(membershipStatus, "n") == 0)
        {
                cout<<"There are 3 types of packages to choose from (G for Galaxy, S for Star and N
for Normal): ";
                cin>>packageType;
```

```cpp
        strcpy(membershipStatus, "Non-member");


        if (strcmp(packageType, "G") == 0 || strcmp(packageType, "g") == 0)

        {

                pricePerHour = 78;

                discount = 18;

                strcpy(packageType, "Galaxy");

        }

        else if (strcmp(packageType, "S") == 0 || strcmp(packageType, "s") == 0)

        {

                pricePerHour = 55;

                discount = 15;

                strcpy(packageType, "Star");

        }

        else if (strcmp(packageType, "N") == 0 || strcmp(packageType, "n") == 0)

        {

                pricePerHour = 35;

                discount = 10;

                strcpy(packageType, "Normal");

        }

        else

        {

                cout<<"Invalid type of package or package code";

                return 0;

        }


}

else

{

        cout<<"Invalid membership status";

        return 0;
```

```
        }

        cout<<"How many hours would you like to book for: ";

        cin>>hours;


        totalPrice = ( pricePerHour * hours ) - ((pricePerHour * hours) * discount/100 );


        cout<<"****Bloom & Care****"<<endl;

        cout<<"Membership Status: "<<membershipStatus<<endl;

        cout<<"Package Type: "<<packageType<<endl;

        cout<<"Price Per Hour: RM"<<pricePerHour<<endl;

        cout<<"Hours Booked: "<<hours<<endl;

        cout<<"Discount: "<<discount<<"%"<<endl;

        cout<<"Total Price: RM"<<totalPrice<<endl;


        return 0;

}
```
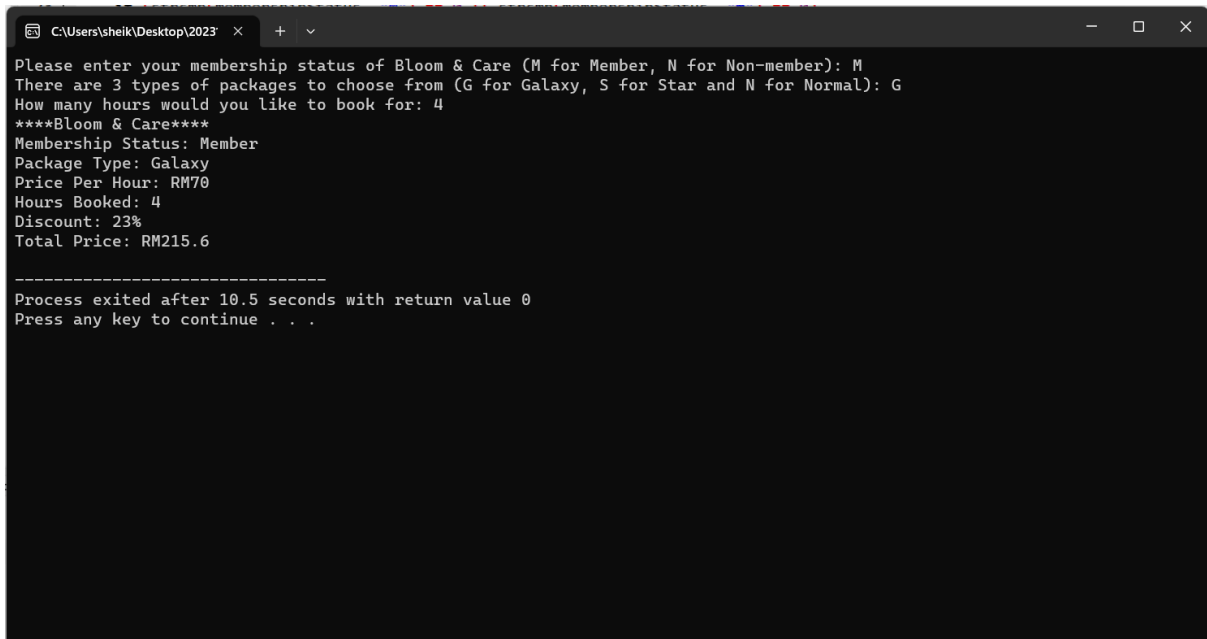
Question 2: Output Screenshot