UTM

UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING

SEMESTER 1

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SECJ1013-02 TEKNIK PENGATURCARAAN I (PROGRAMMING TECHNIQUE I)

ASSIGNMENT 2

SECTION 02

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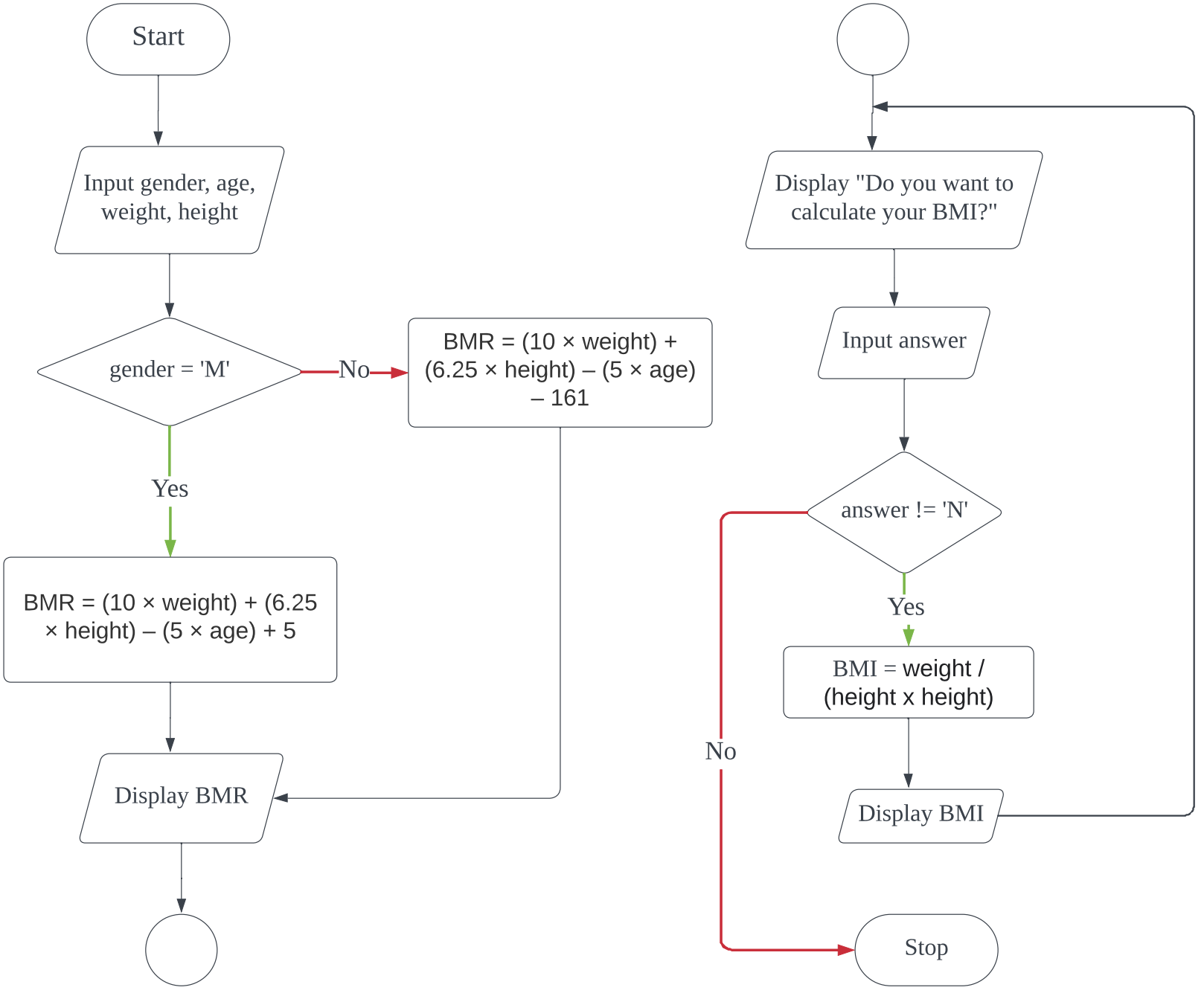
```
#include <iostream>
using namespace std;

int main () {

	//defined variables
	char g, ans; //g=gender
	int age;
	float w, h; //w=weight, h=height
	float BMR, BMI;

	//input
	cout << "Enter gender (M or F): ";
	cin >> g;
	cout << "Enter age: ";
	cin >> age;
	cout << "Enter weight: ";
	cin >> w;
	cout << "Enter height: ";
	cin >> h;

	//callculate BMR
	if (g=='M')
		BMR = (10 * w) + (6.25 * h) - (5 * age) + 5;
	else
		BMR = (10 * w) + (6.25 * h) - (5 * age) - 161;

	//display BMR
	cout << BMR << endl;

	//loop for calculating BMI
```

```
	cout << "Do you want to calculate your BMI? (Y or N)" << endl;
	cin >> ans;

	while (ans=='Y'){
		BMI = w /(h * h);
		cout << BMI << endl;
		cout << "Do you want to calculate your BMI? (Y or N)" << endl;
		cin >> ans;
	}
}
```

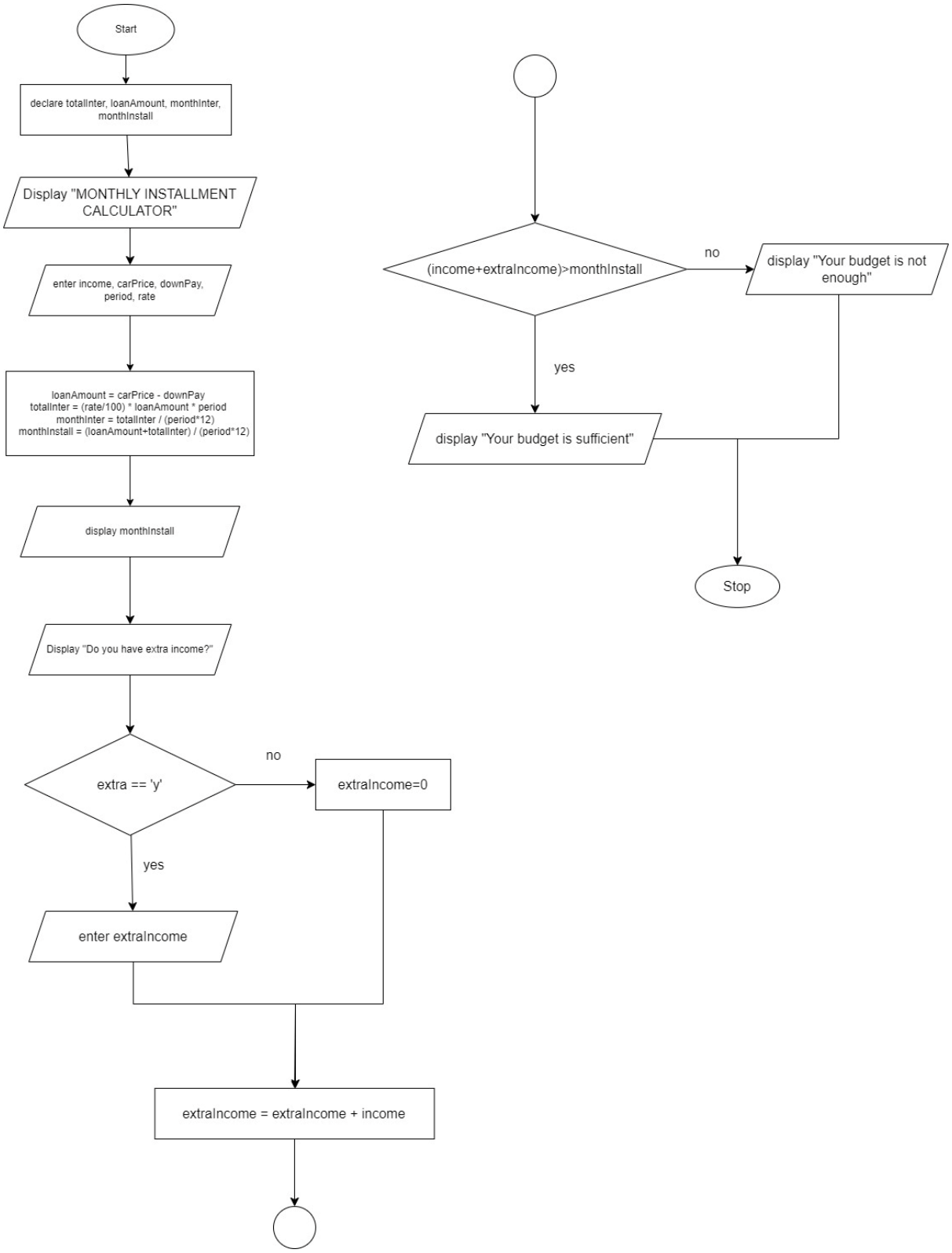

Start
Input gender, age, weight, height
gender = 'M'
No
BMR = (10 × weight) + (6.25 × height) – (5 × age) – 161
Yes
BMR = (10 × weight) + (6.25 × height) – (5 × age) + 5
Display BMR
Display "Do you want to calculate your BMI?"
Input answer
answer != 'N'
Yes
BMI = weight / (height x height)
Display BMI
No
Stop

SET 2

```
#include<iostream>
using namespace std ;

int main()
{
	cout << "MONTHLY INSTALLMENT CALCULATOR" << endl ;

	int period;
	double income, carPrice, downPay, rate;

	//input all informations
	cout << "\nEnter your income(month): RM" ;
	cin >> income ;
	cout << "\nEnter car price : RM" ;
	cin >> carPrice ;
	cout << "Enter down payment (RM) : " ;
	cin >> downPay ;
	cout << "Enter loan period (years) : " ;
	cin >> period ;
	cout << "Enter rate (%): " ;
	cin >> rate ;

	//calculate monthly installment
	double totalInter, loanAmount, monthInter, monthInstall;
	loanAmount = carPrice - downPay ;
	totalInter = (rate/100) * loanAmount * period ;
	monthInter = totalInter / (period*12);
	monthInstall = (loanAmount+totalInter) / (period*12) ;

	cout << "\nMONTHLY INSTALLMENT : RM" << monthInstall << endl;
```

```
	double extraIncome;
	char extra;

	//ask extra income
	cout << "\nDo you have extra income? [y or n] : " ;
	cin >> extra ;

	if (extra == 'y'){
		cout << "Enter extra income(month) : RM" ;
		cin >> extraIncome;
	}
	else {
		extraIncome = 0 ;
	}

	if ((income+extraIncome) > monthInstall){
			cout << "Your budget is sufficient" << endl;
		}
	else{
			cout << "Your budget is not enough" << endl;
		}

	return 0;
}
```

flowchart


Start
declare totalInter, loanAmount, monthInter, monthInstall
Display "MONTHLY INSTALLMENT CALCULATOR"
enter income, carPrice, downPay, period, rate
loanAmount = carPrice - downPay
totalInter = (rate/100) * loanAmount * period
monthInter = totalInter / (period*12)
monthInstall = (loanAmount+totalInter) / (period*12)
display monthInstall
Display "Do you have extra income?"
extra == 'y'
no
extraIncome=0
yes
enter extraIncome
extraIncome = extraIncome + income
(income+extraIncome)>monthInstall
no
display "Your budget is not enough"
yes
display "Your budget is sufficient"
Stop