

DEPARTMENT OF ICT, CFS IIUM
SEMESTER 1 SESSION 2021/2022
ICT0525– INTRO. TO PROGRAMMING
ASSIGNMENT 2 (35 marks)

REQUIREMENTS:

- 1) **Submit to Google Classroom:**
 - a) **Source code file (.c file) Rename the file as A2_#matricno.**
 - b) **Handwritten flowchart.**
 - c) **Screenshot of source code in 1 PDF file.**
- 2) **Due date: 2/11/2021 (Tuesday): 6.00pm**
- 3) **Distribution of marks:**
 - a) **Source code: 25 marks**
 - b) **Flowchart: 10 marks**

QUESTION:

Vending machines:

Below is the list of drink available and the prices.

Drink	Prices
Mineral water	RM1.00
Coca-cola	RM2.50
Seven-UP	RM2.20
Nescafe	RM3.00
SoyDrink	RM1.90

Write a program for a vending machine selling various type of drinks. Requirements:

- Declare and initialize both arrays- drink and price in main().
- Include 3 user defined functions in the program.
 - **ShowMenu()** – Display the list of all drinks and the prices.
 - **GetMoney()** – Ask user input amount of coin. Validate the input from user. Only coins such as 50 cent, 20 cent and 10 cent can be accepted. Let the user enter coins if he/she desired. User may end input coins by inserting -1. Return total coins entered to main().
 - **Purchase()** – will accepted total coins from main(),displayed available drinks and prices that can be purchase using that amount, ask the user selection of drink, amount of money to be paid and show balance.
- You are NOT allowed to use any global variable in this program.
- In the case of COPYING/PLAGIARISM, you will be given **zero mark.**

Draw flowchart for **main ()** only.

Sample output. Bolded number or text indicated user input.

```
Mineral water  RM1.00
Coca-Cola      RM2.50
Seven-UP       RM2.20
Nescafe        RM3.00
Soy Drink      RM1.90

Enter money (cents)): (-1 to stop input): 50

    Total amount inserted until now: RM0.50

Enter money (cents)): (-1 to stop input): 50

    Total amount inserted until now: RM1.00

Enter money (cents)): (-1 to stop input): 50

    Total amount inserted until now: RM1.50

Enter money (cents)): (-1 to stop input): 30
Invalid input!
Please enter again: 20

    Total amount inserted until now: RM1.70

Enter money (cents)): (-1 to stop input): 50

    Total amount inserted until now: RM2.20

Enter money (cents)): (-1 to stop input): 50

    Total amount inserted until now: RM2.70

Enter money (cents)): (-1 to stop input): -1

Available drinks:
Mineral water  RM1.00
Coca-Cola      RM2.50
Seven-UP       RM2.20
Soy Drink      RM1.90

Which one do you like to buy? Coca-Cola
Balance: RM0.20
Press any key to continue . . .
```