SET A

DEPARTMENT OF ICT, CFS IIUM
SEMESTER 2, SESSION 2021/2022

ICT0525 – INTRO. TO PROGRAMMING
ASSIGNMENT 2 (24 marks)

QUESTION:

The following is LRT information from University Station to other selected destinations.

Destination	Distance (km)	Fare (RM)
S-Setiawangsa	40	3.50
B-Bangsar	4	1.20
M-Masjid Jamek	16	2.00
K-Kelana Jaya	16	1.80

Write a program to calculate and display time taken to reach the selected destination. Let the user enter the destination. Consider the speed of the train is 80km/h. Store the data in arrays.

Program requirements:

- Declare these array as global arrays:
  - Create ***ONE (1)*** two-dimensional array named `Destination` that stores the destination names.
  - Create ***TWO (2)*** one-dimensional arrays named `Distance` and `Fare`. The arrays store the distance and fare respectively.
- These function are called by `main()` function:
  - `Search()` function receives destination option and returns the destination's index value.
  - `Calculate()` function receives index value. It then calculates and returns the time taken to reach the destination.
  - `Display()` function receives index value and time taken. It displays the destination, distance, fare and time taken.

The time taken (in minute) is calculated as below:

$$\text{Time taken} = \frac{distance}{speed}$$

Sample Output:

```
WELCOME TO LRT SYSTEM

S-Setiawangsa
B-Bangsar
M-Masjid Jamek
K-Kelana Jaya

Choose the destination: Z
Invalid
```

```
Choose the destination: B

The details of your destination:

Destination    Distance (km)  Fare(RM)
Bangsar        4              1.20

You will reach your destination in 3 minutes
```

Another sample output:

```
WELCOME TO LRT SYSTEM

S-Setiawangsa
B-Bangsar
M-Masjid Jamek
K-Kelana Jaya

Choose the destination: K

The details of your destination:

Destination    Distance (km)  Fare(RM)
Kelana Jaya    16             1.80

You will reach your destination in 12 minutes
```

Draw the flowchart only for the main() function.