ITCS 201 – Fundamentals of Programming
Lecture 11: Lab Assignments
(Submit via PC^2)

Q1: Write a program to convert from the THB to USD and JPY. First, the program receives an integer `n`, which specifies the number of inputs. The program then receives `n` Thai baht's from a user.

For each input,

- The amount of Thai baht is passed to two self-defined functions, named thb2usd and thb2jpy, to convert from THB to USD and from THB to JPY, respectively.
- The program then prints out the amount of USD and JPY with two decimal places.

Note:

- You MUST define two global variables that specify the exchange rates from THB-to-USD and THB-to-JPY.
- Suppose that 1 USD = 32.86 THB and 1 JPY = 0.29 THB.

Sample inputs and outputs:

Case 1:

Input	Output	Expected screen
2 14.5 0	0.44 50.00 0.00 0.00	2 14.5 0 0.44 50.00 0.00 0.00

Case 2:

Input	Output	Expected screen
5 11.5 24.6 30 10 400	0.35 39.66 0.75 84.83 0.91 103.45 0.30 34.48 12.17 1379.31	5 11.5 24.6 30 10 400 0.35 39.66 0.75 84.83 0.91 103.45 0.30 34.48 12.17 1379.31

Q2: Write a program to find the index or the position of the target value (i.e., `target`) in the `DATA` array, and print out whether such target can be found in the array or not. **You MUST write your code in the provided section** in the `find_index.c` file on the MyCourse website.

Note:

- You are **NOT** allowed to create new variables, except for the control variables used in the repetition statement (e.g., `i`). You MUST use the parameters provided in the file.
- You are **NOT** allowed to use any built-in C functions.

Sample inputs and outputs:

Case 1:

Input	Output	Expected screen
`-41`	`Found at 7`	`-41` `Found at 7`

Case 2:

Input	Output	Expected screen
`9`	`Not found`	`9` `Not found`

Q3. Write a program to count how many elements in the `DATA` array that are greater than the input value, named `value`. **You MUST write your code in the provided section** in the `count_gt.c` file on the MyCourse website.

Note:

- You are **NOT** allowed to create new variables, except for the control variables used in the repetition statement (e.g., `i`). You MUST use the parameters provided in the file.
- You are **NOT** allowed to use any built-in C functions.

Sample inputs and outputs:

Case 1:

Input	Output	Expected screen
30	3	30 3

Case 2:

Input	Output	Expected screen
-999	10	-999 10

Q4. Write a program to determine the greatest common divisor (gcd) of `n` integers. First, it receives the number of input integers, `n`. Then it determines and prints out the gcd of these `n` numbers. **You MUST define and use a self-defined function**, named `compute_gcd`, to determine the gcd.

Note:

- `n >= 2`
- The given inputs will always be positive integers.

Sample inputs and outputs:

Case 1:

Input	Output	Expected screen
10 4 12 24 96 8 6 16 20 20 6	2	10 4 12 24 96 8 6 16 20 20 6 2

Case 2:

Input	Output	Expected screen
2 14 14	14	2 14 14 14

Case 3 :

Input	Output	Expected screen
4 3 6 9 2	1	4 3 6 9 2 1