# **Programming Skills Test**

In MyCERT, we require the **Developer** to be proficient in code development. This simple assessment is to access your coding skills in order to solve the provided issue. The assignment can be submit within a week (**deadline**: 7<sup>th</sup> July 2022, 11:59 pm).

## **Question 1:**

Please use C programming language to solve problem as below:

```
Output
INPUT (Insert Odd number)> 5
OUTPUT:

*
**

**

***

***

****
```

## **Question 2:**

Please use Python programming language to solve problem as below:

```
Output
INPUT (Insert Odd number)> 5
OUTPUT:

***

***

***

***

***
```

## **Question 3:**

Please use PHP programming language to solve problem as below:

```
Output
INPUT (Insert Odd number)> 5
OUTPUT:

****

***

***
```

## **Question 4:**

Please use Bash Shell scripting language to solve problem below:

```
Output
INPUT (Insert Odd number)> 5
OUTPUT:
****

***

***
```

## **Question 5**:

Example snippet code below is a bash script which available on a Server A.

```
#!/bin/bash
while true;
do
    m=$((1 + $RANDOM % 999))
    echo $m | nc -l 172.16.22.1 31337
done
```

You are required to develop a client to connect to the Server A. From the input given from Server A, your code shall spell out the number in Bahasa.

For example:

- 1. If the number is 12, the client shall print out as "dua belas"
- 2. If the number is 53, the client shall print out as "lima puluh tiga"

## Requirements:

- Complete the exercise in one of the following languages: *Java, Python, PHP*, *C*++
- The output from the client: 1) number received from Server A, 2) converted number into a word
- All code shall be committed into GitHub (or equivalent) public repository with proper commit history

## **Question 6**:

Your task is to design and implement a To-Do list **Android mobile application** where users can:

- 1. Add a To-Do item
- 2. Delete a To-Do item
- 3. List all To-Do items
- 4. Mark a To-Do item as completed

## Requirements:

- Complete the exercise in one of the following languages: Java, .Net, Dart (Flutter)
- The database should be using SQLite3
- All code shall be committed into GitHub (or equivalent) public repository with proper commit history
- Some unit tests illustrating your testing knowledge is a plus.

#### **Evaluation Criteria:**

• Code quality: clean, readable, testable, and maintainable

#### **Submission:**

Url link the GitHub project with the following content

- 1. README
  - a. Instruction for running the app
  - b. Instruction for testing the app
- 2. Source Code