MATAPELAJARAN: Formal Methods		MARKAH:
TOPIK: Chapter 6	KOD: BCS2213	
PENILAIAN: QUIZ 2	BIL: 1	MASA: 90 Minutes

SESI 2013/2014 SEMESTER 2

NO METRIK : _____

Teaching assignment 2.

Write a Z specification to describe the following **TWO** systems. This assignment will be evaluated in maximum 2.5% of your general marks.

- use CZT-IDE for development;
- please be sure you not have errors in your specifications (red circles in CZT-IDE);
- don't forget to comment your specifications;
- please submit into Kalam 2 files, having the name Lab_2_1_<your ID> and Lab_2_2_<your ID>.

Task1. *A teacher wants to keep a register of students in his class, and to record which of them have completed their homework.*

Write a Z specification to describe the following operations:

- an operation to *Enroll* a new student;
- an operation to *Record* that a student (already enrolled in the class) has finished the homework;
- an operation to *Enquire* whether a student (who must be enrolled) has finished the homework (return answer in the set {yes, no}).

Questions for self-control:
1. What types (given set and freetype) you need define?
2. What logical guards you specify for operations? Please also don't forget to add a guard for *Register* schema.

SESI 2013/2014 SEMESTER 2

NO METRIK : _____

Task2. *Write a Z specification to describe a simple Vocabulary System*

The system should be able to:

1. Record pairs of words, where one word is a *native* language and the other is a *foreign* language.

2. Each word of a pair may serve as translation of the other.

Functions, to be provided for the system:
- a pair of words may be added to the vocabulary;
- a pair of words may be deleted from the vocabulary;
- all translations of a native word into the foreign language may be requested;
- all translation of a foreign word into the native language may be requested.