

Assignment: Create a MIB

Due by the end (11:59pm Sunday) of week 12

The administrative interaction between a lecturer and a class of students is somewhat similar to the interaction between a network manager and a collection of network elements, in that the manager (lecturer) needs to maintain information about each member (student). Your task is to create a MIB that would capture the administrative information that a lecturer would maintain about a student enrolled in TELE9752. You must capture the following information in your MIB:

Student **number** (integer, no need for leading “z”)

Student **name** (text string, no need to separate components, e.g. surname from given names)

Midsession exam mark (integer)

Final exam mark (integer)

Exercise mark (signed integer)

Group **presentation** mark (integer)

Bonus for course improvement (an arbitrary number of pairs of integer + explanation, where the integer records the value of the bonus mark, and the explanation is a text string that explains why the mark was awarded)

Use the names in bold as the names of your objects. Don't worry about the size of the integers (i.e. whether they can fit in 32 bits), but do consider that all marks except for the project are unsigned and their value can only increase over time (e.g. if the lecturer later recognises that he made a mistake). Consult the course outline to determine the weighting for each mark. The exercise mark is signed because students can receive negative marks if caught plagiarising.

Submit your MIB by emailing it as a text file with the name z1234567.mib (where z1234567 is replaced by your student ID) attached to an email sent to t.moors@unsw.edu.au .

About 60% of the marks will reflect whether your MIB works for basic student records, 20% will reflect whether your MIB captures general cases, and 20% will reflect whether your MIB prevents objects having inappropriate (changes in) values.

To check basic syntax, you might want to try loading your MIB in a MIB Browser, e.g.

<http://www.manageengine.com/products/mibbrowser-free-tool/index.html>

An example of a starting point for a MIB is given at

<http://subjects.ee.unsw.edu.au/tele9752/assignment/z1234567.mib>

If you want to see how professionals write MIBs, read

C. Heard: “Guidelines for Authors and Reviewers of MIB Documents”, IETF RFC 4181

The following template is available at

```
TELE9752-MIB  DEFINITIONS ::= BEGIN
  IMPORTS
```

```
    MODULE-IDENTITY, OBJECT-TYPE, Integer32, Counter32, Gauge32, TimeTicks
        FROM SNMPv2-SMI
    DisplayString, TestAndIncr, RowStatus
        FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF
```

```
;
```

```
tele9752student MODULE-IDENTITY
  LAST-UPDATED "201409290000Z"
  ORGANIZATION "University of New South Wales"
  CONTACT-INFO
    "Email: t.moors@unsw.edu.au"
  DESCRIPTION
    "TELE9752 exercise."
  REVISION "201409290000Z"
  DESCRIPTION
    "TELE9752 exercise."
    ::= { unswACN 9752 }
```

```
members OBJECT IDENTIFIER ::= { iso 2 }
australia OBJECT IDENTIFIER ::= { members 36 }
unswACN OBJECT IDENTIFIER -- the University of New South Wales
    ::= { australia 124669736 } -- Australian Company Number (ACN)
```

```
number OBJECT-TYPE -- integer
  SYNTAX Integer32
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION "Student number, no need for leading z"
  ::= { tele9752student 1 }
```

```
-- Add further objects and detail here (& elsewhere if need be)
```

```
END
```