IMS2000: Second Year Studio
Week 5: Studio Activity
Case Study: Normalisation, Data Structure Diagramming and Prototyping

These notes are available on the IMS2000 Web site via http://www.sims.monash.edu.au
Please contact your tutor if you require assistance with these exercises. Tutor email address and consultation times are available on the subject’s Web page under Staff.

Objectives of session
- Practice and develop normalisation and data structure diagramming skills
- Practice and develop prototyping skills
- Practice and develop system design skills by working on Assignment 2
- Complete Journal Entry

Activity 1 – Normalisation, Data Structure Diagramming and Prototyping
[approx. 1½ - 2 hours]

Using the draft System Description, ERD, DFD and Data Dictionary for the Schedule Conference Session function:
- gather all the data required for each entity to meet the business requirements;
- normalise the data for each entity in the ERD;
- draw a Data Structure Diagram;
- develop the interface design prototype for the ‘Display Available Sessions’ prototype

System Description

The conference consists of three streams GUI Interfaces, Educational Interfaces and Designing Interfaces. Each of these streams runs concurrently on each day of the conference, and consists of a number of sessions per day. This information is already in the system.

STREAM (Stream#, Stream Name)
SESSION (Stream#, Day, Start-time, End-time, Session#, Location)

This function should help us with planning the best possible schedule. With each session, we need to note the start and end time, the location, the paper, the person managing the session and the speaker. When scheduling a paper to a session we need to consider the following:
- a speaker presenting multiple papers is not scheduled at the same time or ideally not in sequence
- a speaker is scheduled on the days that they are attending the conference
- a paper is scheduled to the relevant stream
**Entity Relationship Diagram**

STREAM

belongs to

has

final allocation to

managed by

manages

allocated to

SESSION

PAPER

**Data Flow Diagram**

Paper allocation request

Invalid paper allocation request

Allocated sessions

Paper #

Paper allocation details

Stream available sessions

Stream

Person

Person attendance

1.1

Check request validity

1.2

Display available sessions

1.3

Select best session

Paper

Allocated session

Stream available sessions

Allocated sessions

Paper stream
Data Dictionary

**Entities**

**PAPER** =
Paper # +
Allocated-stream #
Speaker-person # +

**PERSON** =
Person # +
Contact-details +
{Attendance-day}

**SESSION** =
Stream # +
Day +
Start-time +
End-time +
Location +
Paper #
Session-manager-person #

**STREAM** =
Stream # +
Stream-name

*Data flows (only for the Display available sessions function)*

**PAPER-STREAM** =
Paper # +
Allocated-stream #

**PAPER-AVAILABLE-SESSIONS** =
Paper #
Allocated -Stream # +
{Available-day +
{Available-start-time}}

**STREAM-AVAILABLE-SESSIONS** =
Allocated-Stream # +
{Available-day +
{Available-start-time}}

**PAPER-ALLOCATION-DETAILS** =
Paper #
Speaker-person #
Session-manager person #
This allows us to find out what other sessions the speaker and session-manager are allocated to

**PERSON-ATTENDANCE** =
Person #
{Day #}
VALID-PAPER-ALLOCATION-REQUEST =
Paper #

Data Stores

PAPER
Paper # +
Speaker-person # +
Session-manager-person #

STREAM
Paper # +
Allocated-stream

SESSION
Stream +
Day +
Start-time +
Allocated-paper #
Speaker-person #
Session-manager-person #

PERSON
Person # +
Attendance-day

Activity 3 – Work on Assignment 2 – Design Specification
[approx. 1½]
Work on Assignment 2. Staff will review any work done on the assignment.

Activity 4 – Reflective Journal Entry
Send an email to your tutor and studio academic with subject heading "IMS2000 Reflective Journal Entry – Student ID".
See Sections 9.1 and 9.2 for sample and template of Reflective Journal Entry.

Preparation for next week:
Assignment 2 – Design Specification due during the Studio Session.
(Friday Studio- see Assignment for hand-in details)