

FIT3003 – Business Intelligence and Data Warehousing

Week 1a – Overview

Semester 2, 2022



Teaching Team

- Chief Examiner



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Overview

1. Data Warehouse Design and Implementation
2. Relation between Data Warehouse and Business Intelligence
3. Main requirements:
 - Knowledge of relational database
 - SQL skill

Learning Outcomes

On successful completion of this unit, students should be able to:

1. Design multi-dimensional databases and data warehouses;
2. Use fact and dimensional modelling;
3. Implement online analytical processing (OLAP) queries;
4. Explain the roles of data warehousing architecture and the concepts of granularity in data warehousing;
5. Create business intelligence reports using data warehouses and OLAP.

Topics Covered

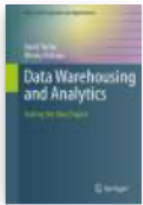
- Data Warehouse
 - Star Schema
 - Bridge Tables
 - Snowflake Schema
 - Multi Fact
 - Temporal Data Warehousing
 - Data Warehousing Architecture

- Online Analytical Processing (OLAP)
- Business Intelligence

Week	Date	Major Topic	Activities	Assessment
0	18-Jul			No formal assessment or activities are undertaken in week 0
1	25-Jul	Transformation	Data Warehousing: Overview	
2	1-Aug		Star Schema	Weekly Moodle Quiz starts from week 2 onwards
3	8-Aug		Bridge Tables	
4	15-Aug		Multi-Fact & Data Cleaning	
5	22-Aug		Data Warehousing Architecture	Take Home Test due date: Monday, 22 August 2022, 11:55pm
6	29-Aug		Temporal Data Warehousing	
7	5-Sep		Hierarchy Determinant Dimension	Major Assignment Checkpoint 1
8	12-Sep	OLAP & BI	OLAP	
9	19-Sep		Business Intelligence	Major Assignment Checkpoint 2
Mid-break	26-Sep			
10	3-Oct	OLAP & BI	Business Intelligence	
11	10-Oct	Advanced DW & Analytics	Advanced topics in DW I	Major Assignment due date: Monday, 10 October 2022, 11:55pm
12	17-Oct		Advanced topics in DW II Revision	Video Submission due date: Monday, 17 October 2022, 11:55pm

Textbook

Taniar, D., & Rahayu, Wenny. (2022). *Data Warehousing and Analytics : Fueling the Data Engine*.



BOOK

Data Warehousing and Analytics : Fueling the Data Engine.

David. Taniar

2022

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Software

1. Oracle DBMS

<https://www.oracle.com/tools/downloads/sqldev-downloads.html>

2. Monash VPN

<https://www.monash.edu/esolutions/network/vpn>

3. Microsoft Power BI

<https://powerbi.microsoft.com/en-au/desktop/>

OR

4. MoVE

<https://move.monash.edu/>

Lectures

- Clayton Campus: Tuesday 13:00 (AEST/AEDT)
- Malaysia Campus: Monday 12:00 (MYT)

Check:

- **Allocate+** for your schedule and location
- **Class Streaming** page on Moodle for Zoom link if you are enrolled for online class

Laboratories

- Labs and times:
 - Labs start from **Week 1**
 - Check **Allocate+** for your schedule
 - Check **Class Streaming** page on Moodle for Zoom link if you are enrolled for online class
 - Any problem with the time allocation? Contact the **Timetabling Team**

Assessments

Assessment Task	Weight	Due Date	Description
Take Home Test	10%	Week 5 – Monday, 22 August 2022, 11:55pm	Individual assessment
Major Assignment: BI & DW	20%	Week 11 – Monday, 10 October 2022, 11:55pm	<p>Group assignment - Group of 2 students.</p> <p>There will be progress checkpoints in Week 7 and Week 9:</p> <ul style="list-style-type: none">• Checkpoint 1 (1%) - Week 7 during tutorial• Checkpoint 2 (1%) - Week 9 during tutorial <p>Final Report & Code (18%) - Week 11</p>
Video Presentation: Advanced DW	5%	Week 12 – Monday, 17 October 2022, 11:55pm	Individual assessment
Weekly Moodle Quiz	5%	Open from Monday to Friday each week (close at 11:55pm each Friday)	Individual assessment. Quiz starts from Week 2
Scheduled Final Assessment	60%	During the examination period. Date TBA.	<p>Examination, 2 hours and 10 minutes</p> <p>Online and closed-book</p>

Assessments

- Unit's assessments consist of non-exam components (40%) and exam (60%)
- To pass the unit you must attempt/achieve:
 - non-exam components, and the examination
 - $\geq 45\%$ of the possible marks in the non-exam assessments
 - $\geq 45\%$ of the possible marks in the exam
 - $\geq 50\%$ of possible marks