PSM: METHODOLOGY & WRITING FORMAT

Chapter 1 review

- Here are some problems I detected in the few submissions that I read:
  - Spelling, grammar, format
  - The use of "I", "we", "kita", "saya" ➔ you cannot use these
  - Some I had problem reading due to:
    - No topic given with chapter
    - Unclear on the problem they are trying to solve

Citations ➔ reference were not there, but neither were citations. Please be careful.

CHone
INBOX | NOW VIEWING: NEW PAPERS ▼

Submit File

	AUTHOR	TITLE	SIMILARITY	GR
☐	C C	cch1	0%	
☐	D D	dch1	0%	
☐	E E	ech1	0%	
☐	F F	FCH1	4%	
☐	A A	ach1	9%	
☐	B B	bch1	37%	

Chapter 2 review

Bab		Tajuk
2		**Kajian Literatur**
	2.1	Pengenalan
	2.2	Kajian Kes Organisasi
		2.2.1 Organisasi, struktur RISDA
		2.2.2 Program Tanaman Semula RISDA
	2.3	Analisis Sistem Semasa
		2.3.1 Penggunaan Sistem Manual
		2.3.2 Kekuatan dan Kelemahan
	2.4	Perbandingan Sistem-sistem Sedia Ada
		2.4.1 Sistem Pengurusan Sekolah 1BestariNet (SPS)
		2.4.2 Perbandingan dengan sistem yang dicadangkan
	2.5	Teknologi yang Digunakan
		2.5.1 Database – MySQL
		2.5.2 Web Server
		2.5.3 Aplikasi – Android Studio
	2.6	Ringkasan Bab

TABLE OF CONTENT

2.1 Introduction

2.2 Johor Homestay System Concept

2.3 Study on existing system

2.3.1 Malaysia Homestay

2.3.2 iBilik

2.3.3 go2Homestay

2.4 Comparison of existing system with Johor Homestay System

2.5 Summary

Slide 1

Guess what is this topic.

Research or Development?

Slide 2

Methodology: Sys_Dev

- Describes : The framework that is used to structure, plan, and control the process of developing an information system.
- There are many frameworks, each with its own recognized strengths and weaknesses.
  - One system development methodology is not necessarily suitable for use by **all** projects.
- To choose, look at:
  - The kind of project ➜ based on various technical, organizational, project and team considerations

Slide 3

Methodology: Research

- Describes
  - the rationale for the use of specific procedures or techniques
    - Techniques used to identify, select, and analyze information applied to understanding the research problem
  - thereby, allowing the reader to critically evaluate a study's overall validity and reliability.
- The methodology section seek to answer two main questions:
  - How was the data collected or generated?
  - How was it analyzed?

Slide 4

CH3: OUTLINE

System Development Track	Research Track
Chapter 3: System Development Methodology	**Chapter 3: Research Methodology**
3.1 Introduction	3.1 Introduction
3.2 Methodology choice and justification.	3.2 Operational Framework/Research Workflow
3.3 Phases within the chosen methodology (traditional or modern)	• Details of each research phase of with regards to research objectives.
• Describes activities and process in each phase	• Gantt Chart for PSM 1 and PSM 2
• Design modelling (e.g. using UML)	3.3 Justification
	• Tools
• Design tools (e.g. Rational Rose)	• Data
• Gantt Chart for PSM 1 and PSM 2	• Technique
3.4 Describe briefly the technology or tools used to develop the system.	3.4 Performance Measurement
3.5 System requirement analysis: hardware and software	3.5 Chapter summary
• List and justify	
3.6 Chapter summary	

This is the guideline for the chapter. Read the description carefully to understand.

This chapter gives the reader a look at the process of your project ➜ must be written directly and precise

CH3: Sys_Dev

Chapter 3: System Development Methodology
3.1 Introduction
3.2 Methodology choice and justification.
3.3 Phases within the chosen methodology (traditional or modern)
- Describes activities and process in each phase
- Design modelling (e.g. using UML)
- Design tools (e.g. Rational Rose)
- Gantt Chart for PSM 1 and PSM 2
3.4 Describe briefly the technology or tools used to develop the system.
3.5 System requirement analysis: hardware and software
- List and justify
3.6 Chapter summary

3.1 Introduction to the chapter
3.2 The chosen Methodology and why you chose it → only your chosen methodology, no need to explain all others
3.3 The Phases within the chosen methodology
→ Explain what each phase is about
→Describe which part of your project happens in each phase
3.4 The tools/technology used for system development
→Describe what you use and what for.
3.5 System requirement analysis
→ Hardware, Software Requirements
→ Describe what is used for development and running of the system (server, user)
3.6 Chapter summary

CH3: Sys_Dev

Chapter 3: System Development Methodology
3.1 Introduction
3.2 Methodology choice and justification.
3.3 Phases within the chosen methodology (traditional or modern)
- Describes activities and process in each phase
- Design modelling (e.g. using UML)
- Design tools (e.g. Rational Rose)
- Gantt Chart for PSM 1 and PSM 2
3.4 Describe briefly the technology or tools used to develop the system.
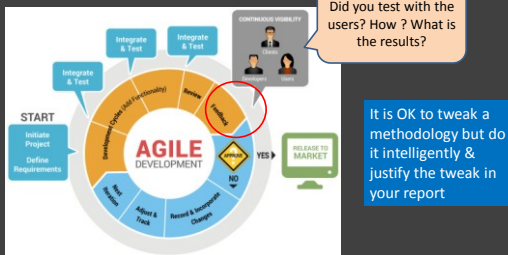3.5 System requirement analysis: hardware and software
- List and justify
3.6 Chapter summary

3.1 Introduction to the chapter
3.2 The BuatJe Methodology
   3.2.1 Justification

3.3 The Phases within BuatJe Methodology
   3.3.1 P1 : Initial investigation
   3.3.2 P2 : User requirements
   3.3.3 P3: System Design
   3.3.4 P4: System Development and Testing
   3.3.5 P5: System Implementation
  3.3.6 PSM Gantt Charts

3.4 The tools used for system development
   3.4.1 Extol RFID Kit
   3.4.2 Redz Web Server

3.5 System requirement analysis
   3.5.1 Hardware Requirements
   3.5.2 Software Requirements

3.6 Chapter summary

Methodology: SysDev: Tips

- Choose the suitable and appropriate methodology → fully understand how it works → Then follow ALL the steps

Did you test with the users? How ? What is the results?

It is OK to tweak a methodology but do it intelligently & justify the tweak in your report

UNDERSTAND THE METHODOLOGY YOU ARE GOING TO USE

RAD (rapid application development) is a concept that *products can be developed faster and of higher quality* through → Gathering requirements workshops, Prototyping and early, reiterative user testing of designs, The re-use of software components, *A rigidly paced schedule* that defers design improvements to the next product version

JAD (Joint Application Development) is a methodology that *involves the client or end user in the design and development of an application, through a succession of collaborative workshops* called JAD sessions. It leads to faster development and greater client satisfaction.

Scrum is an agile software development model based on *multiple small teams working in an intensive and interdependent manner*.

CH3: Research

3.1 Introduction and overview of the chapter
3.2 Research Framework
→ *A research framework is a collection of interrelated steps or processes that provides logical steps in guiding the research such as determining what things will be delivered, measured, what are the inputs to each steps and outputs of the research.*
3.3 Tools and technique justifications
→ *Explain why you use that tool or algorithm or datasets, etc.*
3.5 Performance Measurement
→ *what are you trying to find out in your research? Speed? Security? Usability?*
→ *How are you measuring it?*

3.6 Chapter summary

CH3: Research

3.1 Introduction and overview of the chapter
3.2 Research Framework
3.2.1 Phase 1: Review and Studies of techniques and Characteristics
3.2.2 Phase 2: Design, Develop and Experiment
3.2.3 Phase 3: Data Collection
3.2.4 Phase 4: Result Analysis and Discussion
3.2.5 PSM Gantt Charts

3.3 Hardware and software requirements
3.4.1 Extol RFID Kit
3.4.2 Redz Web Server

3.5 Performance Measurement
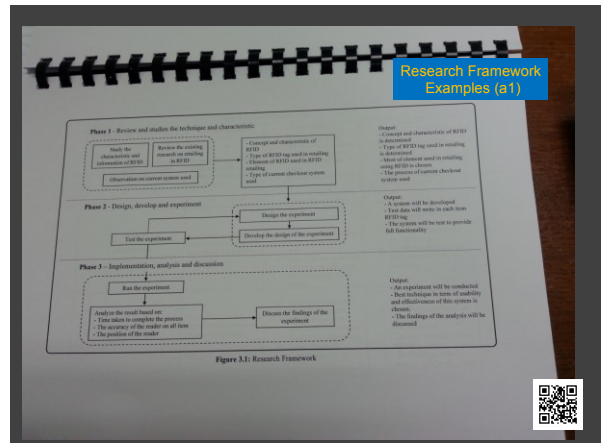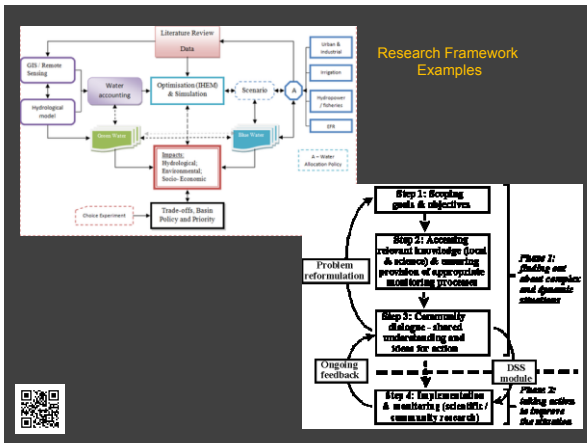*3.5.1 Speed*
3.5.2 Usability

3.6 Chapter summary

Research Framework Examples

Research Framework Examples (a1)

Slide 1

Research Framework Examples (a2)

Table 3.1: Overall Research Plan

Slide 2 — Aside:

Aside:

- Always discuss with your SV the best way to go.
  - Which methodology, tools, techniques etc.
- You might think "*It is just PSM*"
  - *But what would your future employer think of your ability and skills?*
- *Research is fluid and dynamic → make sure you understand what you are aiming for*
  - *Consult SV regularly*
  - *Align methodology with your objectives (rule of thumb: 1 phase = 1 objective)*
  - *Unlike project-based, you have to test your work using data*
  - *Best to get the experiments done early (before half-sem of PSM2)*

Slide 3

If You Don't Write

Nothing Will Change.

PSM WRITING FORMAT

Slide 4 — Introduction

Introduction

- Report is a big portion of your PSM grades.
  - It must be written well
  - It must have correct grammar and spelling
  - It must follow UTM report writing standards
  - No plagiarism
- The report shows your maturity in handling customer or client communication
  - Communicating process, procedure and coding through written media

Regulations and standards

- We follow UTM Thesis Writing guideline
  - UTM Thesis Manual (2007 edition) – there is a 2015 version… I believe.
  - Report pagination (margins etc), citation and reference guide
- PSM Handbook
  - Report structure, citation and reference guide

Did you know:

- Your title should be a short and snappy description of the main topic of the thesis.
  - Not more than 15 words.
- Figures and tables are numbered in sequence following the chapters, not sections.
  - Chapter 3
    - Figure 3.1, Figure 3.2, Figure 3.3 and so on.
    - Table 4.3 is the third table that appears in Chapter 4
- The maximum number of pages for the report (excluding appendix)
  - 50 for PSM 1 and 100 for PSM2.

Did you know:

- Abbreviations are acceptable, but must be first introduced in full.
  - Example: The Virtual Private Network (VPN) is -----. To that effect VPN is universally accepted.
- Do not put EVERYTHING (charts, survey forms, all sequence diagram, user manual, etc) in the main text
  - Put supportive information in appendix
- All figures, tables, formulas, appendices MUST BE referred to in the main text.
  - Example: Figure 5.1 shows the robust incline of speed in A, while Table 5.2 shows the tabulation across the different algorithms
  - A table should be positioned after it is being cited for the first time in the text.

Did you know:

- Abstracts
  - must be bilingual → 1in English and 1in B.Malaysia
    - The language of your thesis will be first, followed by the other
    - Example: Thesis language (English) → Abstract English, Abstract BM
  - written in one paragraph and not exceed 300 words.
    - It should states the field of study, problem definition, methodology adopted, research process, results obtained and conclusion of the research.
- For citation and references, FK Thesis follow thesis format with Harvard System style
  - refer to UTM Thesis Guidelines

Aside:

- Keep these handy and refer always:
  - UTM Thesis Guide and PSM Handbook
- Proofread (at the very least use the MSWord checker)
- Write as you progress along (even more serious in PSM2)
- Cite diligently
- Start in a formatted template (according to UTM standard) → it will lessen headaches
- Always have a backup copy
- Consult SV for guidance

***Note:

- There are several tools available for preparing thesis and technical paper writing.
- Students are encouraged to use packages for preparing the thesis:
  - **LaTeX + BibTeX** (http://code.google.com/p/utmthesis) or
  - **Microsoft Word + EndNotes**.
  - Students can manage references easily by using these tools. It can generate the list of references automatically.
- For students who will write their thesis in English, PSZ also provides a software called StyleWriter to proofread your thesis.

"The scariest moment is always just before you start."
- Stephen King

End of Class Today