

# **B. Sc. CSIT Final Year Project Work:**

Structuring Report, Presentation and Evaluation

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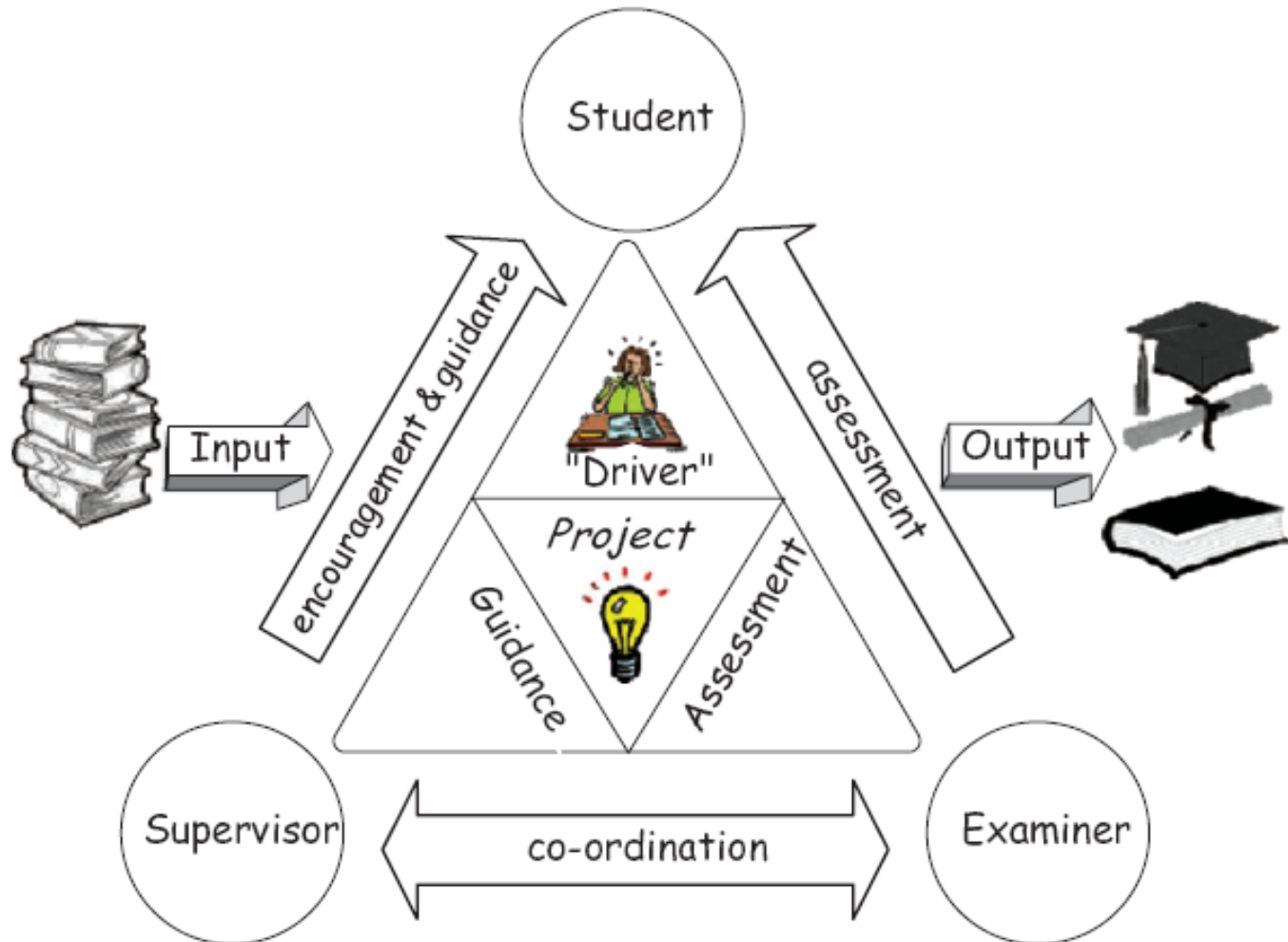
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# Project



- Pursuing a project within academia is not the same as performing a project within industry.
- Academic projects should provide evidence of a much deeper understanding of what you are doing. They require some form of justification and contextualization.

# Actors in project



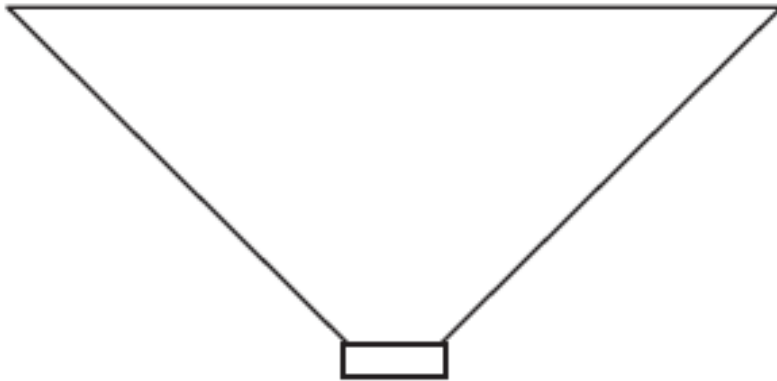
# Project Report

- A detailed documentation of your project work
- As the report represents your project, remember that the good work you have performed can be ruined by a poor report.
- Is the major evidence of your project when it is finished
- Although you can improve a poor project with a good report, you must remember that your report is a reflection of your project and you *cannot disguise sloppy investigation, development, implementation, analyses and method* with a few carefully chosen words.

# Writing and Structuring the report: Basic Requirements

- A report should be:
  - ***Well structured ( As per the standard set by the University)***
  - ***Well written***
  - ***Concise and focused***
  - ***Clear***
  - ***Properly typeset (As per the standard set by University)***
  - ***Well referenced and cited properly (IEEE Standard)***

# Writing and Structuring the report: Strategy



Subject area

Sub-area

Problem

Aspect of problem

Aim

Funnel the chapters

# Writing and Structuring the report: Considerations

- **What is the purpose of the report?**
  - To present your work in best light,
  - To disseminate your ideas to others
  - To get better evaluated! 😊
- **Who is going to read it?**
  - What do they already know?
  - What do you want them to learn?
  - What do you want them to gain from your report?
  - Will it be read by people other than your examiners (junior and students, academics and experts,.....)

# Writing and Structuring the report: Approaches

- Creating chapter breakdown hierarchy and then after student can go on to complete these sections at an appropriate point in their project when results are obtained and information is acquired.
- Equally distribute chapters to each participant. All of group members should have equal contribution and knowledge about the chapters in the report.



# Writing and Structuring the report: When to start?

- **Don't ever wait for deadlines!**
- Be aware of leaving students **entire write-up to the very end (They will for a 'big bang' approach).**
- Parallel documentation with project work activities.
- Chapter write-up, reviews by students and feedbacks by supervisors. This will mean students do not have to endure the stress of a prolonged writing phase when their project nears completion.

# Writing and Structuring the report: Order

- Order to writing that you are suggested to follow:
  - **Identify Structure: Chapter Breakdown**
  - **Identify Presentational style: Formatting**
  - **Write Abstract**
  - **Develop Main Body**
  - **Articulate Conclusion and Recommendations**
  - **Add References and Appendices**
  - **Proof Read, Check and Correct**

# Writing and Structuring the report: Structure

- **Title Page** (Make sure its uniform as per university standard)
- **Supervisor's Certificate/ Recommendation**
- **Supervisor, Internal, External Examiners' Approval**
- **Acknowledgements**
- **Abstract**
- **Table of Content**
- **List of Figures / Tables / Listings**
- **Main Body**
- **References / Bibliography**
- **Appendix**

# Writing and Structuring the report: Writing Abstract

- Briefly summarize the nature of your research project, its context, how it was carried out, and what its major findings were.
- The abstract provides the reader with an overview of your project and is the basis on which many readers will decide whether or not to read your report at all.
- With this in mind your abstract should be concise (preferably no more than one paragraph long), clear and interesting.

# Writing and Structuring the report: Main Body

## Chapter 1: Introduction

### 1.1 Introduction:

A good report requires a good introduction which sets the scene by putting the work into a bigger perspective. The introduction gives the reader an idea of the report's content so it should also help you to clarify your own ideas of project.

This section should reflect concepts in project title.

# Writing and Structuring the report: Main Body

## Chapter 1: Introduction

### 1.2 Problem Definition:

The problem you attempted to solve. It should present the problem in a non-ambiguous way. What the problem is? How and Why the problem is important, justifying why it should be studied?.

### 1.3 Objectives:

- List the objectives to overcome the problem statement.
- Better list in points.
- Concise and specific to project

# Writing and Structuring the report: Main Body

## **Chapter 1: Introduction**

### **1.4 Scope and Limitation**

Scope and Limitation of the project: technologies/  
features / domains / algorithms

**1.5. Background study (if needed, optional, depends on project)** May include supporting theoretical or mathematical concepts.

### **1.5 Report Organization**

# Writing and Structuring the report: Main Body

## **Chapter 2: Requirement Analysis and Feasibility Analysis**

### **2.1 Related Works / Existing Work / Literature Review**

- = Provide the reader with more information about what the project is about before setting it in a wider context. Review of research works (Articles/ Books/....) done on the relevant field of study. Review of similar project works of theories behind them.
- Appropriate citation is essential.



# Writing and Structuring the report: Main Body

## Chapter 2: Requirement Analysis and Feasibility Analysis

### 2.2. Requirement Analysis

#### 2.2.1. Functional Requirements

(Use use case diagram for reflecting the functional requirements)

#### 2.2.2. Non-functional Requirements

### 2.3. Feasibility Analysis

#### 2.3.1. Economic

#### 2.3.2. Operational

#### 2.3.2. Technical

#### 2.3.2. Schedule (Reflection using PERT Chart / Gantt Chart)

**(Contextualization needed!)**

# Writing and Structuring the report: Main Body

## Chapter 2: Requirement Analysis and Feasibility Analysis

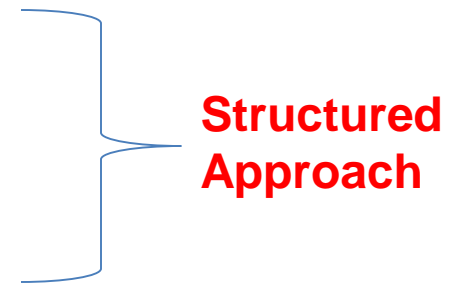
### 2.4. Structuring System Requirements

#### 2.4.1. Data Modeling

- ER Diagram

#### 2.4.2. Process Modeling

- DFD (Context Level, Level 1, 2 ..)



**Either go for Structured or Object Oriented not their mixture!**

**(Use appropriate case tools available)**

# Writing and Structuring the report: Main Body

## Chapter 3: System Design

### 3.1. System Design

**3.2.1. Database Schema Design:** (Schema structures / tables), normalization

**3.2.2. Interface Design**

**3.2.3. Input Output Design** (Data inputs, Controlling data inputs, data errors)

**3.2.4. Dialogue Design** (Using dialogue diagrams)

**3.2.5. Process Design** (Modular Decomposition: Decomposition Diagram, flowchart for each models, physical dfd)

**In case of Object oriented: Class diagram with data types, visibility, Adding interface class, data access layer classes, sequence diagram, activity diagram**  
**Flexible to content and models.**

# Writing and Structuring the report: Main Body

## Chapter 4: Implementation and Testing

### 4.1 Implementation:

A bit description about how implementation is done. Overview of development methodology adapted.

**4.1.1 Tools Used:** Description about the tools and technologies. But never forget to relate them with your project. **Contextualize their use in the project implementation.**

**(Avoid Basic definitions!)**

**4.1.2 Description / Listing of major classes / methods / data structures or any other modules implemented.**

# Writing and Structuring the report: Main Body

## Chapter 4: Implementation and Testing

### 4.2. Testing

#### 4.2.1. Unit Testing

#### 4.2.2. Integration Testing

#### 4.2.3. System Testing

- **List the probable test cases you attempted during testing phase.**
- **Sample test cases for each testing strategy.**
- **Both positive and negative test cases.**

**Again, avoid the basic definitions !**

# Writing and Structuring the report: Main Body

## **Chapter 5: Maintenance and Support**

Possible/ Prospective strategies for maintenance and support of the project implemented (if any).

# Writing and Structuring the report: Main Body

## Chapter 6: Conclusion and Recommendation

### 6.1. Conclusion:

Summarize how project is done? What the project has achieved? What has been its *contribution*? *How the project has* met its initial aims and objectives and if not, explains why? What are the major results and findings?

### 6.2. Recommendations

# Writing and Structuring the report: References

## References and Bibliography

- **References** list only those articles that have been referred to within the report itself.
- A **bibliography** will list all the articles you have used in your project but are not necessarily referred to in the body of the report. Bibliographies are useful for the reader in that they identify all material that is relevant for taking your work forward or understanding it in more depth.
- **Referencing:** There are two aspects to referencing. The first aspect to consider is how to use references correctly within the body of your report – in terms of their presentation and appropriateness – called ***citing/citation***. *The second aspect is how to present these references* correctly at the end of your report.



# Writing and Structuring the report: References

## Citing References and Bibliography

- There are numerous variations on these techniques that have their own structures.
- *We are prescribed to follow IEEE format for project report.*
- *APA is prescribed for internship report.*

# Writing and Structuring the report: Appendix

## Appendix

- Snap shots
- *Source Code*
- *Annex Tables*

# Writing and Structuring the report: Styling/ Format

- The entire document should be in Times New Roman font.
- The font size has to be 12 throughout in paragraphs.
- Font size for the headings will be 16,14,12 (As per the levels)
- Figure captions should be centred below the figures.
- Table captions should be centred above
- Paragraphs must be justified alignment with 1.5 spacing
- The margins to be set as follows:
  - Top = 1"
  - Bottom = 1"
  - Left = 1.25 "
  - Right = 1"

# Writing and Structuring the report: Avoid Plagiarism

- Plagiarism can be performed accidentally or deliberately, but in either case it is deemed a serious academic offence.
- This is one reason why students should perform an extensive literature survey – to ensure that they are not merely repeating the work of others.
- Have proper citation and referencing.

**Examiners are quite alert!**

# Examiners Perspective: Assessment Criteria for Report

- **Clarity of content presentation in the report, typos, mistakes**
- **Hierarchical Structure / Chapter distribution / Content Placement**
- **Consistency between different parts of the report**
- **How far the content is relevant and supporting the project work**
- **Ability to differentiate between others' thoughts and own**
- **Ability to handle references and citations**
- **General stylistic impression**

# Don't let the students to Forget !

- Review
- Proof Read,
- Check and Correct
- Not to be much conscious about volume of the report
- Pre-submission ( **A week before final defense!**)

**Make sure that students read their report thoroughly beforehand so that it is fresh in their mind !**

# Structuring the Presentation

- An oral presentation can be compared with an iceberg (*Be clever to reflect the hidden iceberg!*)
- A number of considerations go into the development of an oral presentation: preparation, content, visual aids, the delivery of the presentation itself and dealing with questions.

# Structuring the Presentation ...

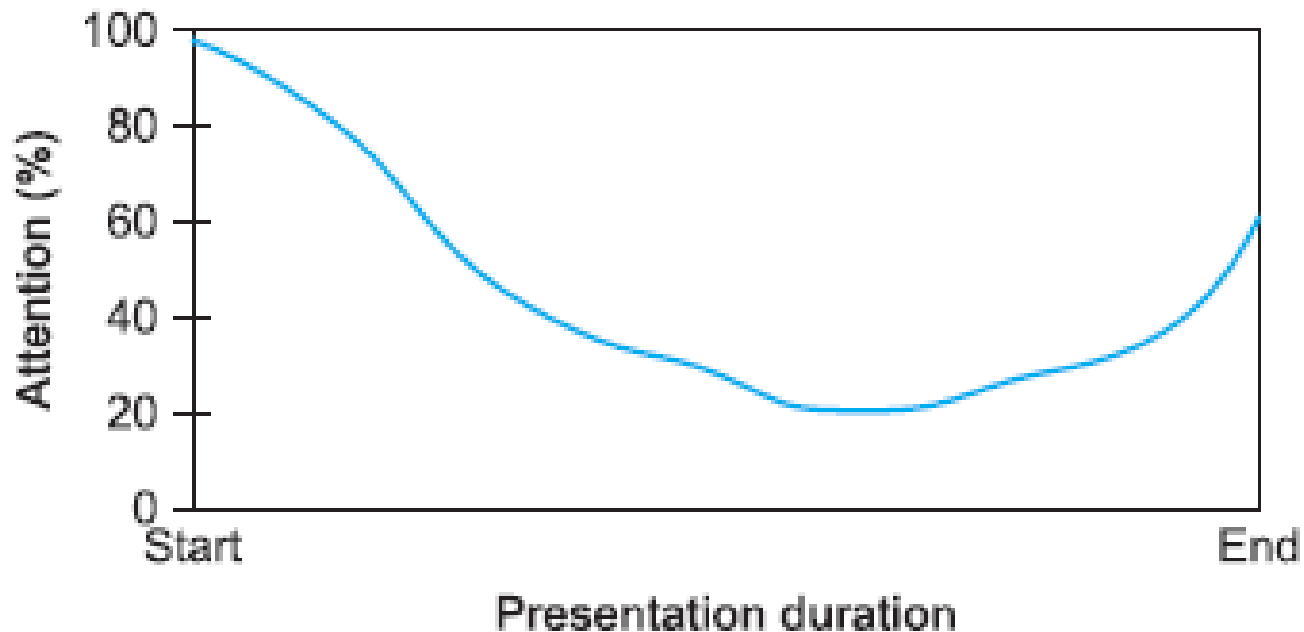
**Introduction:** One or two slides that introduce you and your talk.

**Main body:** The slides that constitute the bulk of your presentation and cover the main points that you wish to get across. How many slides you use within this section will depend on the length of the presentation and the information you wish to convey. **(As per the report hierarchy)**

**Summary/conclusion.** A few slides that summarize your presentation and perhaps identify areas of further work.



# Structuring the Presentation: Time vs. attention



# Structuring the Presentation: Slides

- **Proper content**
- **Proper formatting of slides:** design, font, font size, text color, etc.

# Structuring the Presentation: Effective Speaking

- **Communicate Well:** Standard language
- **Dress Well:** Be formal.
- **Voice Projection:** Voice level and Clarity
- **Eye Contact:** Eye contact with entire audience
- **Animated:** Be animated and enthusiastic
- **Coordination:** Between the team members
- **Starting / Closing statement:** Introduction/ Thank you / Queries

# Final Defense and Submission

- Final Defense may be tentatively within 2 weeks of final board exams.
- Report Submission before a week of defense. (*Should be handed to the external before three days of defense by the institution.*)
- Report should be approved copy from supervisor before submission

# Project Evaluation

- **Marks distribution in percentage (out of 100):**

Proposal	10%.
Mid Term Defense	30%
Final Defense	60%

- **Evaluators:**

Project Supervisor	60%
Internal ( HOD/Program Coordinator/Faculty)	20%
External	20%

**(A fair evaluation is done by internal, supervisor and external. Marks are always justifiable )**

**May be rejected if not promising work demonstrated! Need to re-defense next year!!!**

# Project Evaluation

## **Focus of the evaluation**

Scope of the Project (Value Added)

Analysis and Design of Project

Project Report Documentation

Presentation

Project Implementation (followed by demo session)

Viva/Question Answer

# Suggested Readings

- Christian W. Dawson, **“Projects in Computing and Information Systems: A Student’s Guide”**, 2<sup>nd</sup> Edition, Addison Wesley.
- Hossein Hassani, **“How to do Final Year Projects: A Practical Guideline for Computer Science and IT Students”**.
- Mikael Berndtsson, Jörgen Hansson, Björn Olsson, Björn Lundell **“Thesis Projects: A Guide for Students in Computer Science and Information Systems”**, 2<sup>nd</sup> Edition, Springer.

- Thank you ! Keep Learning.