

# **BCA 6<sup>th</sup> Semester Project Work Orientation**

## **PROJECT II: CAPJ356**

**Presented By:**

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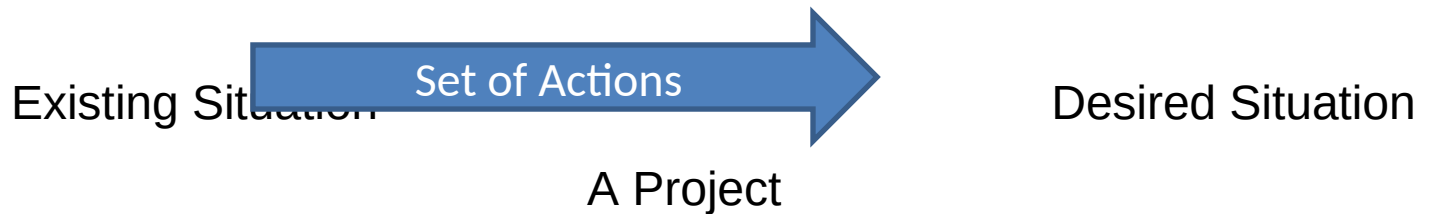
# Nature of the Project

- This is an academic project focused on development of computer applications.
- Students are encouraged to develop project individually.
- Students should be encouraged to develop web based, mobile based or desktop based applications using the language technologies of their expertise and comfort

# Nature of the Project (Contd...)

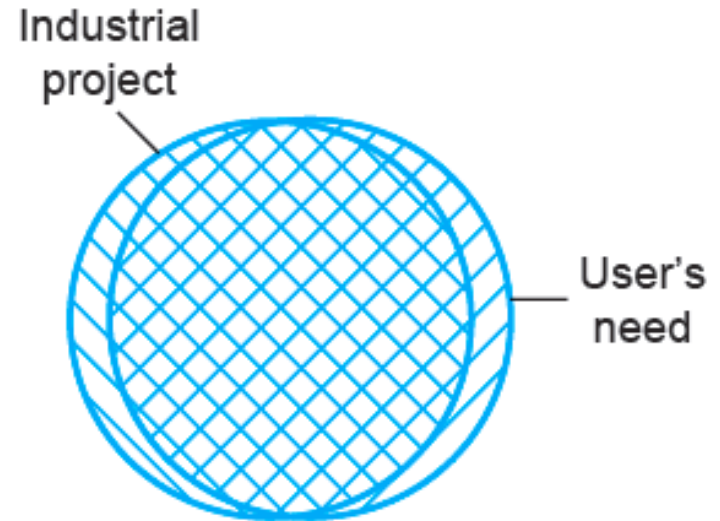
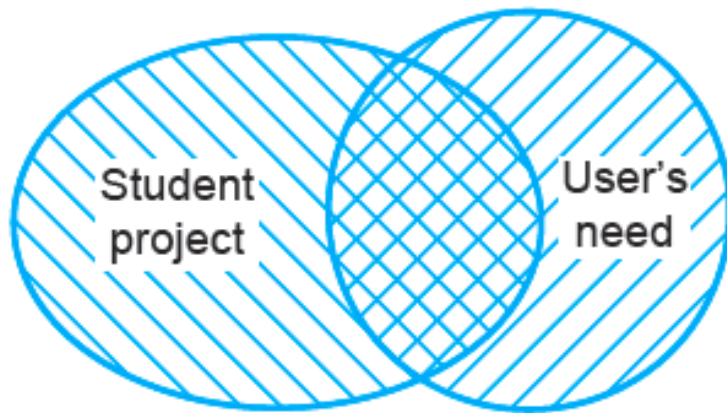
- Students can develop the applications using database operations and sophisticated algorithms.
- The students can rely on the appropriate language technologies that they have learnt till sixth semester, however it is not limited.
- Students may work on projects like Web applications, Information systems, E-Commerce Portals, Game applications etc.
- Inclusion of any sort of algorithm is mandatory

# 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.

# Project



# How to proceed??

- ***Subject area:*** *What is the topic and scope of your project?*
- ***Aim:*** *What is the goal of your project?*
- ***Arguments:*** *Why is it important to investigate the chosen topic?*
- ***Objectives:*** *Preliminary ideas for how you intend to achieve the aim.*

*Have Early Start ! Prepare Proposals !!!*

# Project Classification

By Language	By Domain	By Application Areas
PHP Projects	Data Mining	Management Systems
Android Projects	Artificial Intelligence	Information Systems (TPS,MIS)
iOS Projects	Networking Projects	Expert systems, BI systems
Java Projects	Information Security	Utilities
.Net Projects	Smart Card/ Biometrics	Portals
	Cloud Computing Projects	Games

# Latest trend in technology

- ✓ Internet of things/ Smart systems
- ✓ Big Data/ Analytics
- ✓ Deep learning systems
- ✓ Autonomous driving systems
- ✓ Intelligent Assistants
- ✓ Virtualization
- ✓ Artificial Intelligence



# Web Development: Front End

- HTML/HTML5
- CSS
- Javascript
- AngularJS
- Actionscript
- VBScript
- Silverlight
- Java (applets)

# Web Development: Back End

- Java (JSP, servlets, J2EE)
- PHP
- .NET
- Ruby
- Python
- Perl
- Javascript (Node JS)

# Web Development: Database Options

- MySQL
- Oracle
- MariaDB
- MongoDB
- PostgreSQL
- SQLite
- Firebird
- CUBRID

# Web Development: Servers

- Apache
- Apache Tomcat
- IIS
- GlassFish

Register/Publish your websites/themes so that it can be listed as a part of portfolio in you CV.

# Top Frameworks

- **Angular JS**
- **Laravel**
- **React.js**
- **Node.js**
- **Ruby on Rails**
- **Django**
- **Symphony**
- **ASP.NET.**
- **Codeigniter**

# Algorithms

- Classification
- Prediction
- AI
- Similarity
- Image Processing
- Cryptographic and many more



**Choosing Platforms like Android /  
Web based / Desktop based is not  
a big deal !**

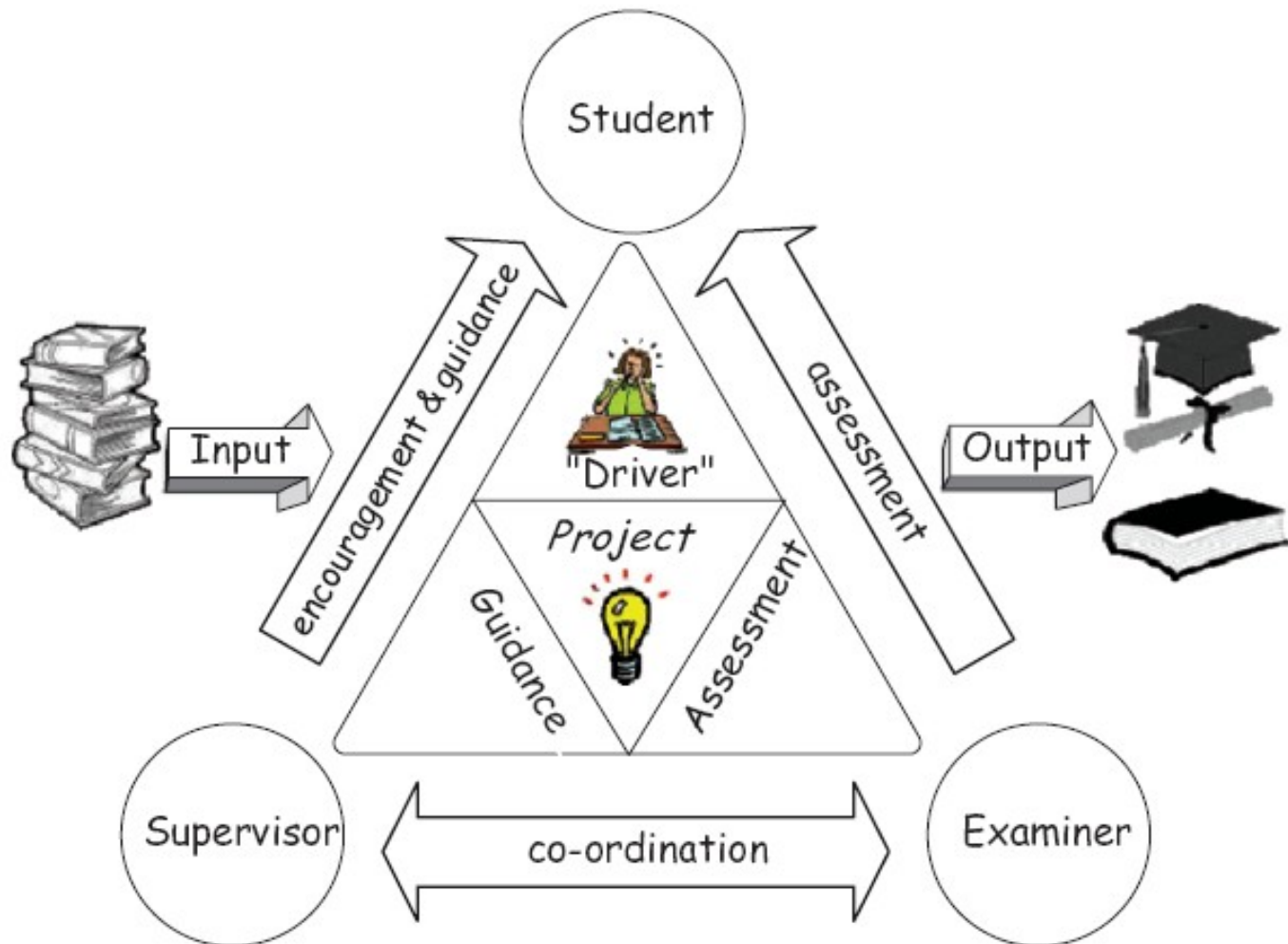
**Main thing is the concept .. !!**

# Prepare Proposal

1. Introduction
2. Problem Statement (Why have you chosen this topic?)
3. Objective
4. Methodology
  - 4.1. Related Works (Literature Review)
  - 4.2. Algorithms (Naïve Bayes Classifier.....)
  - 4.2. Feasibility Study
    - 5.2.1. Technical
    - 5.2.2. Operational
    - 5.2.3. Economical
  - 4.3 Data Collection
  - 4.4. Tools
    - 5.3.1. Analysis and Design tools
    - 5.3.2. Implementation tools ( Front End , Back End)
5. Proposed work (By system flowcharts, use cases or other appropriate diagrams)
6. Expected Outcome
7. Working Schedule



# 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: Considerations

- **What is the purpose of the report?**
  - To present your work in best light,
  - To disseminate your ideas to others
  - To obtain best marks! 😊
- **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 (future employers, other students, academics and experts,.....)

# Writing and Structuring the report: Order

- Order to writing that you are suggested to follow:
  - **Identify Structure: Chapter Breakdown** [Chapter 1: Introduction, Chapter 2: Requirement and Feasibility Analysis, ..... ]
  - **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**
- **Supervisor's Certificate/ Recommendation**
- **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.

## Final Report Structure



# 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.***

# Citation and References: IEEE

## Citation

Jenkins and Busher report that beavers eat several kinds of herbaceous plants as well as the leaves, twigs, and bark of most species of woody plants that grow near water [1]. Beavers have been shown to be discriminate eaters of hardwoods [2].

## References

[1] S.H. Jenkins and P.E. Busher, "Castor canadensis," Mammalian Species. Vol. 20, Jan. 1979.

[2] H.S. Crawford, R.G. Hooper, and R.F. Harlow, Woody Plants Selected by Beavers in the Appalachian and Valley Province. Upper Darby, PA: U.S. Department of Agriculture, 1976.

# Writing and Structuring the report: Appendix

## **Appendix**

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

# 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.

# Project Evaluation

**Project evaluation is based on:**

Scope of the Project (Value Added)

Analysis and Design of Project

Project Report Documentation

Presentation

Project Implementation (followed by demo session)

Viva/Question Answer

# Project Evaluation

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

Proposal (First Stage)	10%.
Second Stage	70% (50% + 20%)
Final Stage	20%

- **Evaluators:**

- Head / Program Coordinator – 10%
- Project Supervisor – 50%
- Internal Examiner – 20%
- External Examiner – 20%

# Project Demo

- 2 minutes demo (with narration) for midterm, internal final and final project presentation for hassle free proceedings.



# Tentative Schedule

Month	Date	Activities
April	4	Project Work Orientation (8:30 am Onwards)
April	7	Topic Submission
	18	Proposal Submission
	23	Proposal Presentation
May	13	Mid Defense
June	10	Final Internal Defense

## 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.

# ANY QUERIES?