In order to enable students to draft a professional project report, the general guidelines are given in this document. Students are required to follow these guidelines and be careful in look and feel of the report by maintaining uniformity of font, font size, headings, titles, line spacing, indentation etc.
While getting the print, carefully check margins (especially left margin).
A report is considered to be professional not only on look & feel but above all on content. So put all the effort to make it content rich and informative.

1. ARRANGEMENT OF CONTENT

The sequence in which to arrange content of project report is as follows:

Cover Page
Certificate
Abstract
Acknowledgement
Table of Contents
List of Abbreviations
Chapters
References
Project Summary

The tables and figures shall be introduced at the appropriate places.
Appendix-1 is compulsory. Rests of the appendices are optional and students have to decide about them. It may vary with project.

2. PAGE DIMENSION AND BINDING SPECIFICATIONS

Hard black binding should be used with A4 size paper (front sheet- transparent and last sheet- black).

3. DESCRIPTION

3.1 Cover Page

A specimen copy of the Cover page of the project report is given in **Appendix 1.**

3.2 Certificate

A specimen copy of the Certificate of the project report is given in **Appendix 2.**

3.3 Abstract

Abstract should be one page synopsis of the project report typed 1.5 line spacing, Font Style Times

New Roman and Font Size 12.

An abstract is a self-contained, short, and powerful statement that describes a larger work. An abstract is not a review, nor does it evaluate the work being abstracted.

3.4 Acknowledgement

It should be brief and should not exceed one page when typed 1.5 line spacing. Font Style Times New Roman and Font Size 12.

3.5 Table of Contents

The table of contents should list all material following it as well as any material which precedes it. The title page will not find a place among the items listed in the Table of Contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head. A specimen copy of the Table of Contents of the project report is given in **Appendix 5, 6 & 7.**

3.6 List of Abbreviations

The list should contain the acronyms used in the report content with their full form. A specimen copy of the List of Abbreviations is given in **Appendix 8.**

3.7 Chapters

The main text will be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions.

- Each chapter should be given an appropriate title.
- Tables and figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
- Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page, which refers to the material they annotate.
- Chapter heading : **CHAPTER 1** (font 20, Upper case, Bold)
- Division heading : 1.1 **INTRODUCTION** (font 14, Upper case, Bold)
- Sub-Division heading: **1.1.1 OUTLINE OF PROJECT REPORT** (font 12, Upper Case, Bold)
- Inner headings : **1.1.2.1 Literature review** (font 12, Sentence case, Bold)

A specimen copy of the Chapter is given in **Appendix 10.**

NOTE: ***Each chapter should be preceded by a sheet containing Chapter number and chapter name, as given in Appendix-9.***

3.8 Appendices

Appendices are provided to give supplementary information to support the main text.

Appendices should be numbered using Arabic numerals, e.g. Appendix-1, Appendix- 2, etc.

Appendices, Tables and References appearing in appendices should be numbered and referred to as appropriate places just as in the case of chapters.

Appendices shall carry the title of the work reported and the same title shall be made in the contents page also.

3.9 List of References

The reference material should be listed in the alphabetical order of the first author. The name of the author/authors should be immediately followed by the year and other details. References should be arranged in the following order:

1) Journals & Research Papers
2) Books
3) Websites (it should not be a search engine, provide complete URL up to page)

A specimen copy of the List of References is given in **Appendix 12.**

3.10 Project Summary

A predefined format is released and students are required to fill the details. Its purpose is to summarize project write to many different aspects which is not possible to cover in Abstract.

A specimen copy of the List of References is given in **Appendix 13.**

4. TYPING INSTRUCTIONS

The impression on the typed copies should be black in color.

One and a half line spacing should be used for typing the general text. The general text shall be typed in the Font style, Times New Roman, Font size 12 and justified.

The layout should provide a margin of 1.5"inch on the left, 1.1 " inch on the top and bottom and

1" inch on the right , as given in Appendix-8.

5. NUMBERING INSTRUCTIONS

5.1 Page Numbering

- All page numbers should be placed at the **bottom middle**.
- Use lower case Roman numerals (ii, iii, iv, etc.) on all pages preceding the first page of chapter one. The title page counts as page i, but the number **does not appear**. Therefore, the first page showing a number will be the certificate page with ii at the bottom.
- Arabic numerals (beginning with 1, 2, 3, 4, etc.) start at chapter one or the introduction.

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5.2 Numbering of Chapters, Divisions and Sub-Divisions

- A chapter can be divided into Sections, Subsections and SubsubSections so as to present different concepts separately. Sections and subsections can be numbered using decimal points, e.g. 2.2 for the second section in Chapter 2 and 2.3.4 for the fourth Subsection in third Section of Chapter 2.
- The Section and Sub-Section titles along with their numbers in 14 and 12pt fonts, respectively, in bold face.

5.3 Numbering of Tables and Figures

- Table and figures shall be numbered chapter wise. For example, the fourth figure in chapter 5 will bear the number Figure 5.4 or Fig 5.4.
- Table / figure number and title (in Times New Roman) shall be printed at the center of the line font size (10pt) in bold face using both upper and lower case. First letter of each word in the table / figure title must be in capital case.
- Table number and title will be placed above the table while the figure number and caption will be located below the figure.

6. SIZE OF PROJECT REPORT

The size of project report should be between 30 - 60 pages of typed matter reckoned from the first page of Chapter 1 to the last page.

7. NUMBER OF COPIES TO BE SUBMITTED

Two copies of report are to be submitted to the department. Apart from this, every student of the group should have one copy each.

8. CHAPTER CONTENT

The following is suggested format for arranging the project report matter into various chapters according to type of project. Students are required to follow the section guidelines accordingly.

Section-I: Chapter content instructions for all web/android based projects

1. Introduction

   This chapter must describe the current scenario of working (including automation level) in the domain for which the project is going to develop. Also, mention objectives that will be achieved after completing this project.

2. Software and Hardware requirements

   List all the software tools that are required for design, development, testing and installation of the project. Depending on these and the volume of data handle by the project, computer hardware resource requirement should be given.

3. Problem Description

   Here define the issues in working domain that are required to solve using automation. Give a detailed explanation.

4. Literature Survey

   This chapter describes the study carried out to understand the domain. Cover the real time working of the **domain**, use terms related to it, process followed, team hierarchy etc. Give example of tools/software's/websites already available.

5. Hardware Requirements Specification

   This chapter includes detail specification about each hardware modules, actuators & sensors if any. For Example: Voltage Specification, Wireless Communication Range, Pin Description of a Sensor, etc.

6. Software Requirements Specification

   This chapter includes section on **Functional Requirements** and **Non-Functional Requirements.**

7. Hardware Design

   The hardware design part must include the following items:
   - i. Architecture
   - ii. Circuit Diagram
   - iii. PCB Layout
   - iv. 3D View of PCB
   - v. Pin Diagram (For Microcontroller Only)

8. Software Design

The design part must include the following items

Use Case Diagram
ER Diagram
Table structure (Table Name, Field Name, Constraints, Purpose)

9. Result & Output Screen

This chapter will contain all the screenshots of output screens with one line description.

10. Deployment

This chapter shall describe the process of installation/configuration of project to bring it into ready to use state.

Section-II: Chapter content instructions for IOT projects

1. Introduction

This chapter must describe the current scenario of working (including automation level) in the domain for which the project is going to develop. Also, mention objectives that will be achieved after completing this project.

2. Software and Hardware requirements

List all the software tools that are required for design, development, testing and installation of the project. Depending on these and the volume of data handle by the project computer hardware resource requirement should be given.

3. Problem Description

Here define the issues in working domain that are required to solve using automation. Give a detailed explanation.

4. Literature Survey

This chapter describes the study carried out to understand the domain. Cover the real time working of the **domain**, use terms related to it, process followed, team hierarchy etc. Give example of tools/software's/websites already available.

5. Hardware Requirements Specification

This chapter includes detail specification about each hardware modules, actuators & sensors if any. For Example: Voltage Specification, Wireless Communication Range, Pin Description of a Sensor, etc.

6. Software Requirements Specification

This chapter includes section on **Functional Requirements** and **Non-Functional Requirements.**

7. Hardware Design

   The hardware design part must include the following items:

   i. Architecture
   ii. Circuit Diagram
   iii. PCB Layout
   iv. 3D View of PCB
   v. Pin Diagram (For Microcontroller Only)

8. Software Design

   i. The design part must include the following items
   ii. Use Case Diagram

9. Result & Output Screen

   This chapter will contain result & all the screenshots of output screens with one line description.

10. Deployment

    This chapter shall describe the process of installation/configuration of project to bring it into ready to use state.

Section-III: Chapter content instructions for Machine Learning projects

1. Introduction

   Motivate and abstractly describe the problem you are addressing and how you are addressing it. What is the Problem? Why is it important? What is your basic approach? A short discussion of how it fits into related Work in the area is also desirable. Summarize the basic results and conclusions that you will present.

2. Problem Definition and Algorithm

   2.1 Task Definition

   Precisely define the problem you are addressing (i.e. formally specify the inputs and outputs). Elaborate on why this is an interesting and important problem.

   2.2 Algorithm Definition

   Describe in reasonable detail the algorithm you are using to address this problem. A psuedocode description of the algorithm you are using is frequently useful. Trace through a concrete example, showing how your algorithm processes this example. The example should be complex enough to illustrate all of the important aspects of the problem but simple enough to be easily understood. If possible, an intuitively meaningful example is better than one with meaningless symbols.

3. Experimental Evaluation

3.1 Methodology

What are criteria you are using to evaluate your method? What specific hypotheses does your experiment test? Describe the experimental methodology that you used. What are the dependent and independent variables? What is the training/test data that was used, and why is it realistic or interesting? Exactly what performance data did you collect and how are you presenting and analyzing it? Comparisons to competing methods that address the same problem are particularly useful.

3.2 Results

Present the quantitative results of your experiments. Graphical data presentation such as graphs and histograms are frequently better than tables. What are the basic differences revealed in the data. Are they statistically significant?

3.3 Discussion

Is your hypothesis supported? What conclusions do the results support about the strengths and weaknesses of your method compared to other methods? How can the results be explained in terms of the underlying properties of the algorithm and/or the data.

4. Related Work

Answer the following questions for each piece of related work that addresses the same or a similar problem. What is their problem and method? How is your problem and method different? Why is your problem and method better?

5. Future Work

What are the major shortcomings of your current method? For each shortcoming, propose additions or enhancements that would help overcome it.

6. Conclusion

Briefly summarize the important results and conclusions. What are the most important points illustrated by your work? How will your results improve future research and applications in the area?

7. Bibliography

Be sure to include a standard, well-formatted, comprehensive bibliography with citations from the text referring to previously published papers in the scientific literature that you utilized or are related to your work.