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|  | **G H Raisoni College of Engineering and Management**  **Wagholi, Pune**  **Department of Artificial Intelligence**  (An Autonomous Institute Affiliated to SPPU, Pune) | **C:\Users\LENOVO\Desktop\Logo1.jpg** |

**Mini Project Work Book**

(Guidelines and Log)

**Course Code: UAIP206**

# (2020 Course)

**S.Y.** **Artificial Intelligence**

Year 2021 - 2022

Group/Project ID:

|  |
| --- |
| **S.Y. A.I.\_B\_01** |

Team Members: 1.

2.

3.

4.

Project Title :

Project Guide: Area of the Project:

**Preamble**

Project work is one of the most important components of the curriculum for an Engineering Graduate. Right from conceiving the idea to its materialization, is a journey that has to be systematized, well defined and well documented to enjoy the full benefits of the efforts undertaken.

Every activity of the project development has its own importance. Team formation, conceiving the idea, preparing the hypothesis, reporting the progress and development to the guide(/mentor), Interactions, suggestions and improvements, relevant documentations in proper format, schedule plans and visit logs are some of the typical activities involved in project development.

Every institute is following their own best methods and techniques as per the guidelines and curriculum of the affiliated university. To bring uniformity for the project work there is a need to come together and prepare comprehensive guidelines and to standardize the process.

This project work book will serve the purpose and facilitate the job of students, guide and project coordinator. This document will reflect accountability, punctuality, technical writing ability and work flow of the work undertaken.

This document will definitely support the work undertaken.

##### i

**General Instructions**

1. Students should enter correct information in the work book.
2. Get all entries verified by respective project guide. No changes are to be made without project guide’s permission.
3. Students should report to their respective guides as per the schedule and its log is to be maintained in the work book.
4. Follow all deadlines and submit all documents strictly as per prescribed formats.
5. The work book should be produced at the time of all discussions, presentations and examinations.
6. The work book must be submitted to project coordinator/ guide/ department / College after successful examination at the end of year/Semester.
7. All documents and reports are to be prepared in Latex only (All the formats specifications provided adheres to MS Word but consequently applicable to finalized project report published using Latex)
8. Submit hard as well as soft copy and maintain copy with each member.

This booklet provides recommendations, guidelines and is record of all related activities associated with Mini project work. This booklet is provided with a genuine intent to bring uniformity, to systematize the project work and to keep audit of work undergone by team members.

## Project Work

The word project comes from the Latin word ‘projectum’ from the Latin verb ‘proicere’, "to throw something forwards" which in turn comes from pro-, which denotes something that precedes the action of the next part of the word in time (paralleling the Greek πρό) and iacere, "to throw". The word "project" thus actually originally meant" something that comes before anything else happens".

(Curtsey Ref[- http://en.wikipedia.org/)](http://en.wikipedia.org/)) The intention of Project work is to conceive an idea and to implement it systematically by using knowledge derived during the course of education mainly to innovate or facilitate.

A group of Under Graduate students at Second Year will undertake project over academic year. Work involves study of feasibility of the project, planning of project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools, design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package.

* + 1. **Guidelines for Project Work Selection, Finalization and Guide Allotment:**

Project is one of the significant contributory team works that has to be completed with distinct impression. It is necessary to explore the domain of interest / research/ thirst area/ society needs. In Toto one cannot figuratively define best project but still there are certain parameters on which we can gauge the quality of project work done. It will be better suited to go for well-defined and relatively safe projects that provide scope for demonstrating proficiency with a low risk of failure especially at Under Graduate level.

##### Process in General:

* 1. Group of 3-4 students; select a topic in the area of AI and Data Science Technology preferably keeping track with recent technological trends and development beyond scope of syllabus avoiding repetition in consecutive years.
  2. The topic must be selected in consultation with the institute guide.
  3. Each student will make a Project presentation using audio/ visual aids for a duration of 20-25 minutes and submit the seminar report prepared in Latex only.
  4. 4. Active participation of each classmate is essential in project.

##### Dos and Don’ts:

* + Project work is expected to involve a combination of study (literature study/ line of investigation), and methodical implementation.
  + Instead of fancied and driven behind the gaudy and ostentatious ideas, utility needs to be emphasized. It is also acceptable to identify the discrepancies/ flaws an existing system and work accordingly to rectify or improve.
  + It is irrational to select the IDE and the software/ tools before the idea is not yet finalized.
  + Identify domain, feasibility and usability of work.
  + Understand the way project will materialize and progress is of at most importance.

#### General Project Evaluation Parameters:

Project work is to be evaluated jointly by both Internal and External examiners, unanimously agreeing upon the parameter like Topic, Contents and Presentation, regularity, Punctuality and Timely Completion, Question and Answers, Report, Paper presentation / Publication, Attendance and Active Participation parameters amongst many others.

1. Problem definition and scope of the project.
2. Thorough literature survey done.
3. Exhaustive and rational requirement analysis.
4. Appropriate software engineering approach followed.
5. Use of project management tools.
6. Comprehensive implementation
7. Optimization considerations (memory, time, resources, costing).
8. Use of parallel/multi-core, embedded, distributed computing approach.
9. Thorough testing of all modules and integration of modules done.
10. Project presentation and demonstration.
11. User interface, ease of use, usability and GUI.
12. Understanding individual capacity, role and involvement in the project.
13. Team work (roles defined, distribution of work, intra-team communication and togetherness).
14. Participation in various contests, publications and IPR.
15. Presentation of work in the form of project report(s). Documents /manuals - project report, quick reference, system, installation guide etc
16. Outcomes / usability/ commercial value/ product conversion of work
17. Consideration of social, safety, environmental, ethical and legal issues

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| **Recommended Format of the Seminar Report:** Title Page with Title of the topic, Name of the candidate with Exam Seat Number / Roll Number, Name of the Guide, Name of the Department, Institution and Year & University  1. Project Approval Sheet/Certificate  2. Abstract and Keywords  3. Acknowledgements  4. Table of Contents, List of Figures, List of Tables and Nomenclature  5. Chapters Covering topic of discussion- Introduction with section including organization of the report, Literature Survey/Details of design/technology/Analytical and/or experimental work if any, Discussions and Conclusions ,Bibliography / References  6. Report Documentation page |

## Undertaking by Students

G.H. Raisoni College of Engineering and Management, Wagholi, Pune

## UNDERTAKING BY STUDENT

We, the students of S.Y. A.I. hereby assure that we will follow all the rules and regulations related to project activity for the academic year 2021-2022. The Project titled-

will be fully designed/ developed by us and every part of the project will be original work and will not be copied/ purchased from any source.

## Name of the student Signature

### 1. \_

2.

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1. **Schedule of Project Work**

**Semester I**

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| --- | --- | --- |
| **Sr.**  **No.** | **Activity Scheduled** | **Date**  **(Tentative)** |
| 1. | Registration of mini project teams |  |
| 2. | Submission of Project Proposal |  |
| 3. | Project presentations |  |
| 4. | Submission of final proposal |  |
| 5. | Review meeting/ presentation for progress of project work- I |  |
| 6. | Review meeting/ presentation for progress of project work- II |  |
| 7. | Submission of mini project report |  |
| 8. | Project work Final Presentation Examination |  |
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1. **Mini Project Review**

The group members are expected to present their work undertaken during the semester. Journey of development has to be rationally presented with thorough literature survey in review meeting.

##### Project Review-I: Problem Statement, Motivation, objectives and Literature Review Feasibility and Scope

**Project Review-II: Requirement Analysis and Design Modeling (Model Refinement and Algorithm development)**

**Project Review-III: Coding / Implementation, Testing, Report Writing**

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|  | | **5. Internal Evaluation Sheet** | | | | | | | | |
|  | **Sr.** | | **Names of Team Members** | **Problem Statement**  **Motivation**  **Objectives**  **(5)** | **Literature**  **Survey**  **Requirement**  **Analysis**  **Scope (5)** | **Modeling**  **Designing**  **Planning & Implementation (10)** | **Understanding**  **Individual involvement**  **(10)** | **Report Writing Presentation**  **(10)** | **Question and Answer**  **(10)** | **Total**  **(50)** |
|  | **1.** | |  |  |  |  |  |  |  |  |
|  | **2.** | |  |  |  |  |  |  |  |  |
|  | **3.** | |  |  |  |  |  |  |  |  |
|  | **4.** | |  |  |  |  |  |  |  |  |
|  | **Name and Signature of Evaluation Committee:**   1. **Prof.** 2. **Prof.**   **Examiners Feedback and Suggestions:** | | | | | | | | | |
|  | **Signature of Guide Signature of Head**  **[Name of Guide] [Name of HoD]** | | | | | | | | | |

1. **Rubrics**

##### Idea Inception

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| **Grade**  **(Grade Point)** | **Excellent**  **(10-9)** | **Very Good**  **(6-8)** | **Fair**  **(3-5)** | **Poor**  **(1-2)** |
| **Parameter** |  |  |  |  |
| Problem Definition and  Scope of the Project |  |  |  |  |
| Literature Survey |  |  |  |  |
| Software Engineering  Approach |  |  |  |  |
| Requirement Analysis |  |  |  |  |

1. **Implementation**

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| **Grade (Grade Point)** | **Excellent**  **(10-9)** | **Very Good**  **(6-8)** | **Fair**  **(3-5)** | **Poor**  **(1-2)** |
| **Parameter** |  |  |  |  |
| Implementation- Design,  platform, coding, |  |  |  |  |
| Optimization considerations(Memory,  time, Resources, Costing) |  |  |  |  |
| Thorough Testing of all  modules |  |  |  |  |
| Integration of modules  and project as whole |  |  |  |  |

1. **Documentation**

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| --- | --- | --- | --- | --- |
| **Grade (Grade Point)** | **Excellent (10-9)** | **Very Good (6-8)** | **Fair (3-5)** | **Poor (1-2)** |
| **Parameter** |  |  |  |  |
| Proposal |  |  |  |  |
| Project Report |  |  |  |  |
| Quick references |  |  |  |  |
| System manual |  |  |  |  |
| Installation Guide |  |  |  |  |
| Work Book |  |  |  |  |

1. **Demonstration**

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| **Grade (Grade Point)** | **Excellent**  **(10-9)** | **Very Good**  **(6-8)** | **Fair**  **(3-5)** | **Poor**  **(1-2)** |
| **Parameter** |  |  |  |  |
| Project Presentation and Demonstration(User  Interface, ease of use, usability) |  |  |  |  |
| Understanding individual capacity & involvement in the  project |  |  |  |  |
| Team Work (Distribution of work, intra-team communication and  togetherness) |  |  |  |  |
| Outcomes / Usability |  |  |  |  |

1. **Environment & Ethics (solution to problems considering)**

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| **Grade**  **(Grade Point)** | **Excellent**  **(10-9)** | **Very Good**  **(6-8)** | **Fair**  **(3-5)** | **Poor**  **(1-2)** |
| **Parameter** |  |  |  |  |
| **social** |  |  |  |  |
| **safety** |  |  |  |  |
| **environmental** |  |  |  |  |
| **ethical** |  |  |  |  |
| **Legal issues** |  |  |  |  |

**Annexure I: Project Report Formatting Guidelines**

1. **Report Size:** Limit your Project report to preferably 25- 40 pages for partial project report. Limit your Project report to preferably 80-100 pages for final project report.
2. **Footer:** The footer “Department of Artificial Intelligence / Data Science, GHRCEM, Pune” should be included. It should be TIMES NEW ROMAN 10 pt and centrally justified.
3. **Header:** Project Title centered and page nos. on right should be included. **Start numbering from introduction.**
4. **Paper Size:** A4 Size, bond paper.

##### Margins: Mirrored.

* 1. **Top : 1 inch**
  2. **Bottom : 1 inch**
  3. **Inside :1.25 inch**
  4. **Outside :1 inch**

1. **Line Spacing:** 1. 5 lines

##### Title of Chapter:

* 1. **Font : Arial (Bold face, Capital, )**
  2. **Size :16 pt, Alignment:** centered

##### All Topics heading:

1. First order Heading: (for example -**1. Introduction**)
   1. Font : Times New Roman(Bold Face)
   2. Size : 14 pt
2. Second order Heading: (for example -**1.1 Evolution)**
   1. Font : Times New Roman(Bold Face)
   2. Size : 12 pt
3. Third order Heading: for example -1.1.1 Image Processing
   1. Font : Times New Roman(Normal Face)
   2. Size : 12 pt

##### 3.

1. **Text:**
   1. Font : Times New Roman(Bold Face)
   2. Size : 12 pt

##### Figures and Tables:

* 1. **Caption:**(for figures below the figure and for tables above the table)
  2. Font: Garamond(Bold)
  3. Size:11 pt
  4. Alignment: Center

##### References :

**. Book**

Author name(s), Book Title, Publisher, Copyright Year, page nos. if any.

##### . Journal/ Magazine/ Periodical

Author name(s), paper name, Journal/ Magazine/ Periodical name, issue no., page nos.