# Learn/Play For Nomad Children

## A PROJECT REPORT

*Submitted by*

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*in partial fulfillment of requirements for the award of the course*

**AGB1211 – DESIGN THINKING**

*in*

**ARTIFICIAL INTELLIGENCE AND MACHINE LEARNIN**
**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY**

(An Autonomous Institution, affiliated to Anna University Chennai and Approved by
AICTE, New Delhi)SAMAYAPURAM – 621 112

**DECEMBER, 2024**i

# K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)

## SAMAYAPURAM – 621 112

## BONAFIDE CERTIFICATE

Certified that this project report **"LEARN/PLAY FOR NOMAD CHILDREN "** is the bonafide work of **NANDHAKISHORE RT(2303811714821022), NAVEEN E (2303811714821024), NIDHISH RAGAV A (2303811714821026), PRAJAN L (2303811714821029)** who carried out the project work during the academic year 2024 - 2025 under my supervision.

**Signature**

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Submitted for the viva-voce examination held on 5.12.24

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**ii

# DECLARATION

I declare that the project report on "**LEARN/PLAY FOR NOMAD CHILDREN"** is the result of original work doneby us and best of our knowledge, similar work has not been submitted to "**ANNA UNIVERSITY CHENNAI**" for the requirement of Degree of **BACHELOR OF ENGINEERING**. This project report is submitted on the partial fulfillment of the requirement of the award of the **AGB1211 – DESIGN THINKING.**

**Signature**

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**NAVEEN E**

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**NIDHISH RAGAV A**

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**PRAJAN L**

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**Place:** Samayapuram

**Date:** 5/12/2024

# ACKNOWLEDGEMENT

It is with great pride that I express our gratitude and indebtedness to our institution, **"K. Ramakrishnan College of Technology (Autonomous)",** for providing us with the opportunity to do this project.

I extend our sincere acknowledgment and appreciation to the esteemed and honorable Chairman, **Dr. K. RAMAKRISHNAN, B.E.,** for having provided the facilities during the course of our study in college.

I would like to express our sincere thanks to our beloved Executive Director, **Dr. S. KUPPUSAMY, MBA, Ph.D.,** for forwarding our project and offering an adequate duration to complete it.

I would like to thank **Dr. N. VASUDEVAN, M.TECH., Ph.D.,** and Principal, whogave the opportunity to frame the project to full satisfaction.

I thank **Dr.T.AVUDAIAPPAN, M.E.,Ph.D**., Head of the Department of

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I wish to convey our profound and heartfelt gratitude to our esteemed project guide

**Ms.S.MURUGAVALLI.,M.E.,(Ph.D)**,Department of **ARTIFICIAL INTELLIGENCE**

for her incalculable suggestions, creativity, assistance and patience,which motivated us tocarry out this project.

I render our sincere thanks to the Course Coordinator and other staff members for providing valuable information during the course.

I wish to express our special thanks to the officials and Lab Technicians of our departments who rendered their help during the period of the work progress.

## VISION OF THE INSTITUTION

To serve the society by offering top-notch technical education on par with global standards.

## MISSION OF THE INSTITUTION

- Be a center of excellence for technical education in emerging technologies by exceeding the needs of industry and society.
- Be an institute with world class research facilities.
- Be an institute nurturing talent and enhancing competency of students to transform them as all- round personalities respecting moral and ethical values.

## VISION AND MISSION OF THE DEPARTMENT

To become a renowned hub for AIML technologies to producing highly talented globally recognizable technocrats to meet industrial needs and societal expectation.

Mission 1: To impart advanced education in AI and Machine Learning, built upon afoundation in Computer Science and Engineering.

Mission 2: To foster experiential learning equips students with engineering skills to tackle real-world problems.

Mission 3: To promote collaborative innovation in AI, machine learning, and related research and development with industries.

Mission 4: To provide an enjoyable environment for pursuing excellence while upholding strong personal and professional values and ethics.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

**PEO 1:** Excel in technical abilities to build intelligent systems in the fields of AI &ML in order to find new opportunities.

**PEO 2:** Embrace new technology to solve real-world problems, whether alone or as a team, while prioritizing ethics and societal benefits.

**PEO 3:** Accept lifelong learning to expand future opportunities in research and product development.

## PROGRAM OUTCOMES

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

**PSO 1:** Expertise in tailoring ML algorithms and models to excel in designated applications and fields.

**PSO 2:** Ability to conduct research, contributing to machine learning advancements and innovations that tackle emerging societal challenges

# ABSTRACT

The main objective of the Learn/Play initiative for nomad children is to provide continuous and engaging educational opportunities that adapt to their mobile lifestyle. This initiative focuses on delivering a diverse range of learning resources and interactive activities that are accessible anytime, anywhere. By offering versatile educational tools, it aims to ensure that nomad children can consistently develop their skills and knowledge despite frequent relocations.

Another important goal is to support the holistic development of nomad children through play-based learning. The initiative includes activities designed to foster social interaction, creativity, and critical thinking. These activities are crafted to be both educational and entertaining, helping children build essential cognitive and emotional skills in a fun and engaging manner. This approach not only enhances their learning experience but also promotes their overall well-being.

Finally, the initiative seeks to provide resources that are user-friendly and adaptable to the varying needs of nomad families. By creating materials that can be easily integrated into daily life, the Learn/Play initiative helps bridge the gap in education for nomad children. This ensures that they can continue their educational journey seamlessly, regardless of their environment, and maintain a sense of stability and continuity in their learning.

# TABLE OF CONTENTS

# CHAPTER 1

# INTRODUCTION

## 12.1   INTRODUCTION

The Mental Health Care Project aims to provide accessible, affordable, and effective mental health support through a mobile app. It offers features like mood tracking, guided meditations, AI-powered chatbots, professional help, and community forums, catering to diverse groups such as working parents, teenagers, and the elderly. The app uses advanced technologies to deliver personalized care, promote mental health awareness, and reduce stigma. Ultimately, it strives to improve overall well-being by addressing barriers to mental health services and creating an inclusive support system. The Learn/Play initiative for nomad children is designed to provide accessible and engaging educational resources that cater to their unique lifestyle.

## 12.2   PROBLEM STATEMENT

Nomad children struggle with accessing consistent and engaging education due to their frequent relocations. Traditional educational resources are often inflexible, creating gaps in their learning. There is a need for adaptable tools that ensure continuous education regardless of their location.

## 12.3  OBJECTIVE

The objective of the Learn/Play initiative for nomad children is to provide accessible and engaging educational resources that support continuous learning despite their mobile lifestyle. By offering a range of adaptable learning tools and interactive activities, this initiative aims to foster cognitive, social, and emotional development.it ensures of their changing environments .

# CHAPTER 2
# PROJECT METHODOLOGY
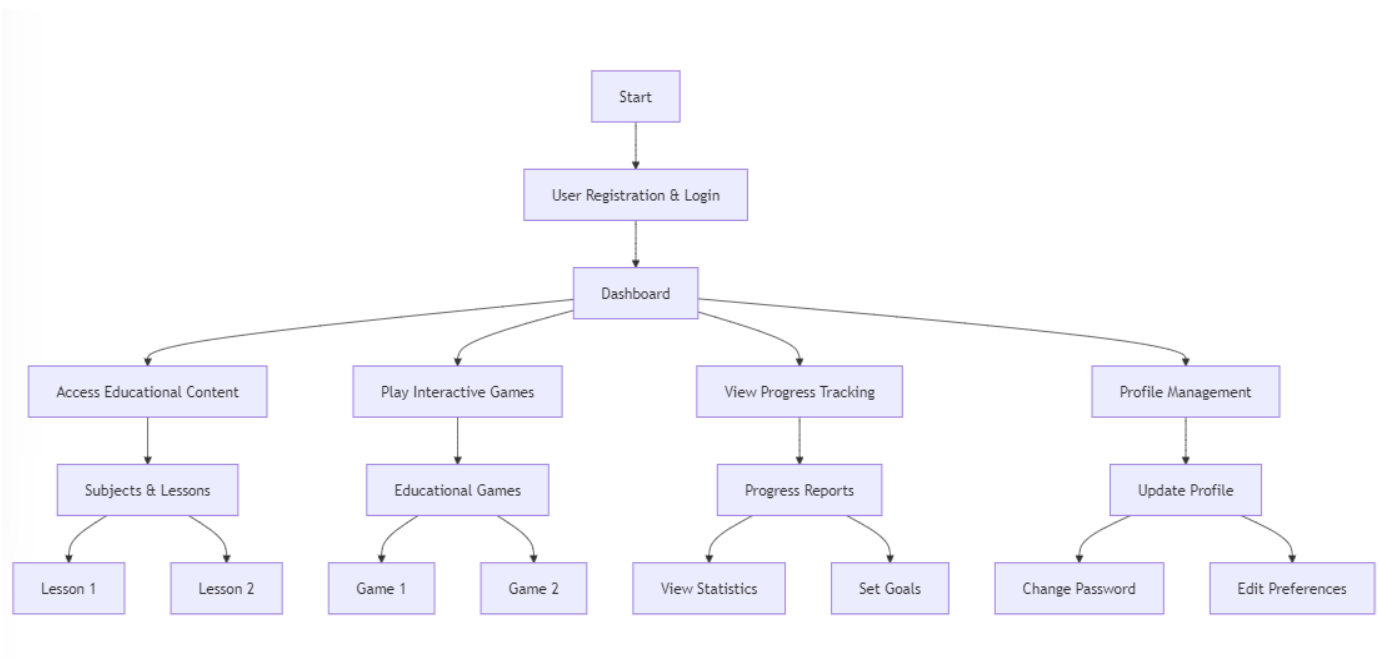
## 2.1 BLOCK DIAGRAM



**FIG 2.1 Flow Chart**

The flowchart for the Learn/Play initiative shows the process from user registration to personalized content delivery, including educational content, interactive games, progress tracking, and content adjustments based on individual needs.

# CHAPTER 3

# KEY PHASES OF DESIGN THINKING

## 3.1 EMPATHIZE

Understand the needs and challenges of nomad children by engaging with them through interviews, surveys, and observations. This helps identify the barriers they face in accessing continuous education and provides valuable insights into their daily lives. By empathizing with their experiences, designers can create solutions that truly address their unique needs and circumstances, ensuring that the educational resources are relevant and impactful.

## 3.2 DEFINE

Analyze the insights gathered during the emphasize phase to pinpoint the core problem. Develop a clear problem statement that encapsulates the primary challenges faced by nomad children in accessing education. This stage is crucial for setting a focused direction for the design efforts, ensuring that the solutions target the most significant issues and provide real value to the users.

## 3.3 IDEATE

Generate a broad range of ideas to solve the defined problem. Encourage creativity and explore various possibilities for delivering educational resources tailored to the mobile lifestyle of nomad children. This phase is about thinking outside the box and considering innovative approaches that can effectively address the identified challenges. The goal is to develop multiple potential solutions that can be refined and tested.

## 3.4 PROTOTYPE

The app prototype features a user-friendly design that includes a variety of educational lessons, interactive games, and personalized content tailored to each child's learning needs. It provides detailed statistics to track progress and identify areas for improvement, ensuring that each child receives targeted support. The lessons cover a wide range of subjects, while the games reinforce learning in an engaging way. Personalized content is dynamically adjusted based on individual performance and preferences, making the learning experience both effective and enjoyable.

## 3.5 TEST

Evaluate the prototypes with real users to gather feedback and assess their effectiveness. Involve nomad children and their families in testing the educational tools and activities to ensure they meet the users' needs. Collecting feedback during this phase is essential for refining the designs and ensuring they are user-centered. This iterative process helps in creating a final solution that is both effective and well-received by the target audience.

# CHAPTER 4
# MODULE DESCRIPTION

## 4.1 User Authentication Module

This module handles user registration, login, and profile management. It ensures secure access and personalized content for each child based on their learning progress and preferences.

## 4.2 Educational Content Module

This module provides access to a wide range of lessons and educational activities. It includes interactive lessons in various subjects, tailored to different age groups and learning levels.

## 4.3 Interactive Games Module

This module offers a variety of educational games designed to reinforce learning through play. The games are engaging and designed to help children develop cognitive and problem-solving skills.

## 4.4 Progress Tracking Module

This module tracks the learning progress of each child, providing detailed statistics and reports. It helps in identifying areas where the child excels and areas needing improvement, ensuring targeted support.

## 4.5 Personalized Content Module

Enables users to customize their preferences, manage notifications, and set up privacy options. This module delivers personalized learning experiences based on the child's performance and preferences. It dynamically adjusts the lessons and activities to match the child's individual needs, making learning more effective and enjoyable. This module ensures that the app meets individual needs, allowing for personalization based on user preferences.

# CHAPTER 5
# CONCLUSION


In conclusion, the Learn/Play initiative for nomad children aims to bridge the gap in education caused by their mobile lifestyle. By providing adaptable and engaging educational resources, the initiative ensures that these children have access to continuous learning opportunities regardless of their location. Through a combination of interactive lessons, educational games, and personalized content, the initiative fosters cognitive, social, and emotional development in a fun and meaningful way. This approach not only supports the academic growth of nomad children but also enhances their overall well-being by making learning an enjoyable and integral part of their daily lives.
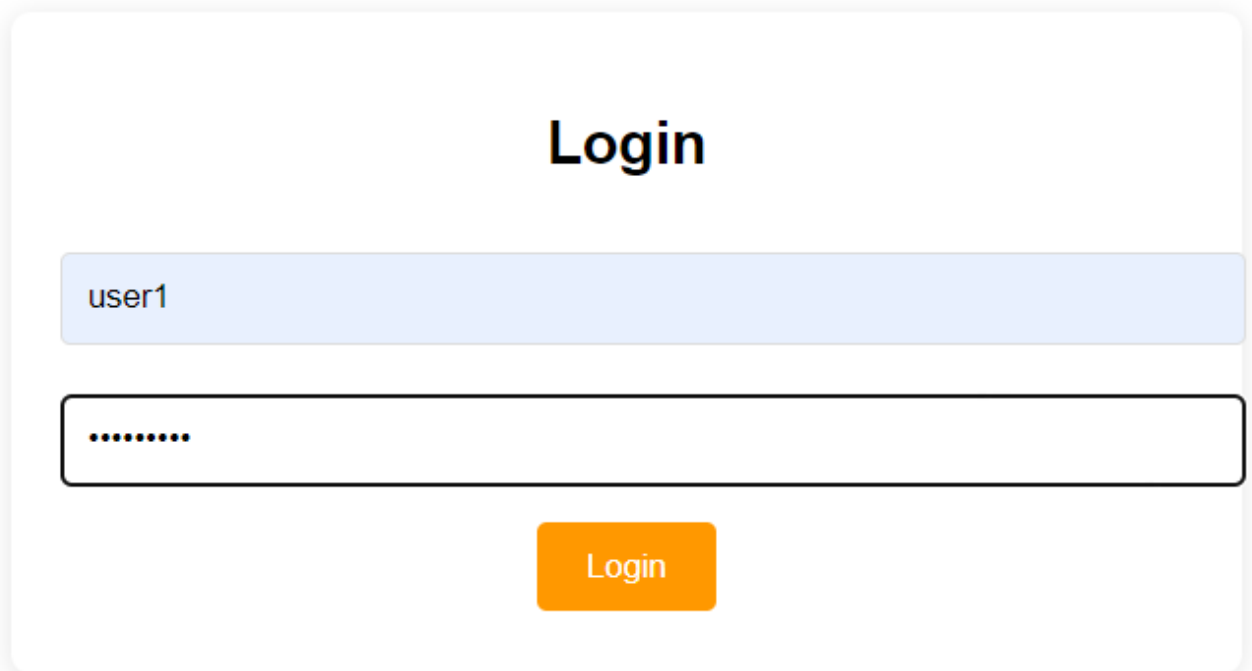

Furthermore, the initiative's design and implementation process, rooted in design thinking, ensures that the solutions are user-centered and effective. By empathizing with the needs of nomad children, defining clear problem statements, generating creative ideas, prototyping, and testing with real users, the initiative continuously evolves to better meet the needs of its users. This iterative process allows for constant improvement and adaptation, ensuring that the educational resources remain relevant and impactful. Ultimately, the Learn/Play initiative stands as a testament to the power of innovative thinking in creating inclusive and effective educational solutions for all children, regardless of their circumstances.

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# APPENDIX A – SCREENSHOTS
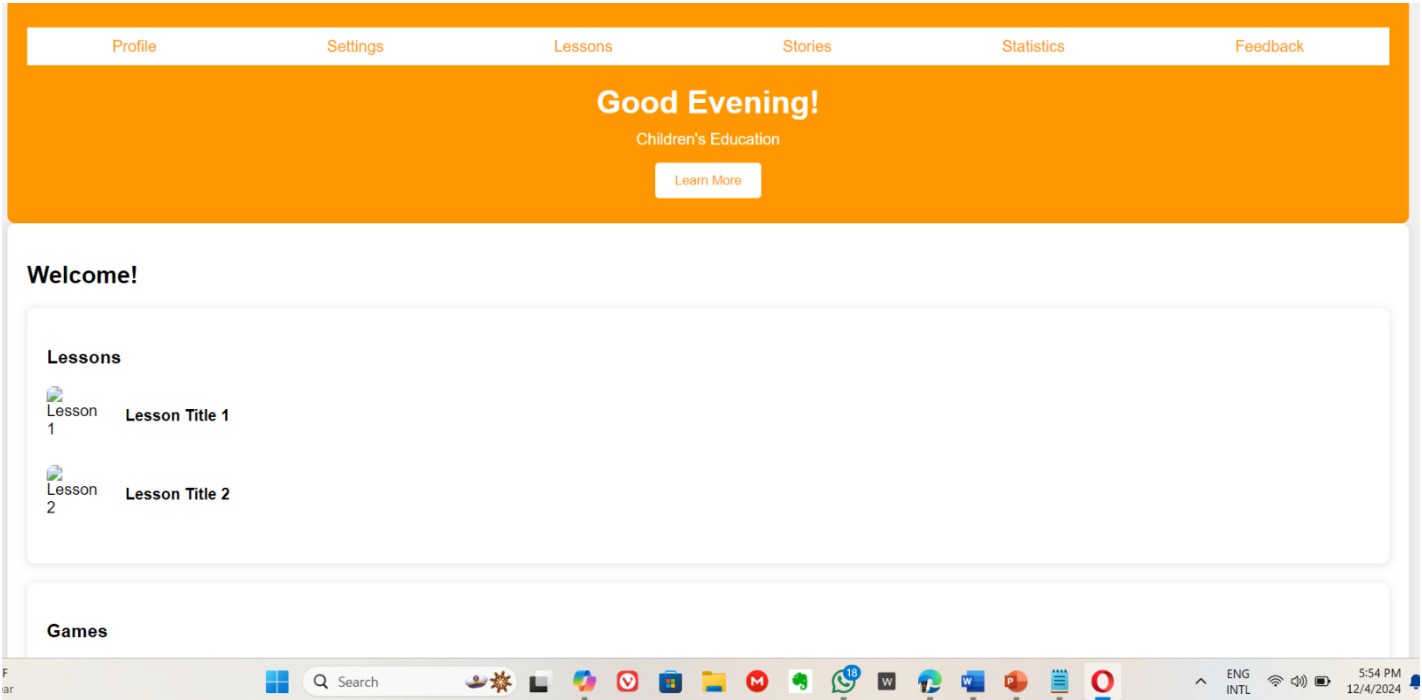
## 1)LOGIN PAGE

**Login**

user1
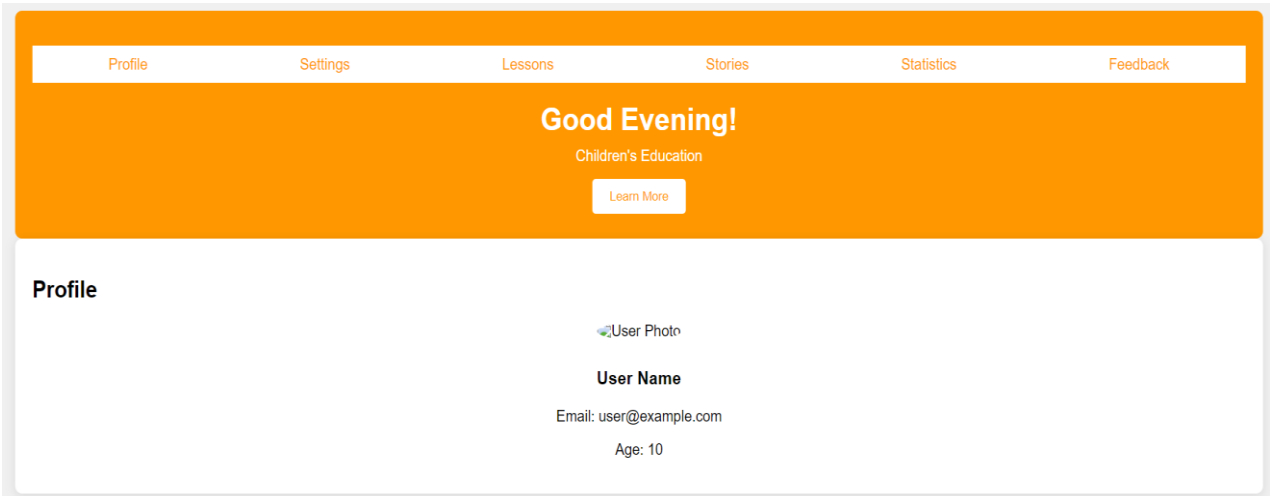
••••••••

Login

# 2) DASHBOARD PAGE



# 3) PROFILE PAGE

# 4) STATISTICS

## Statistics

View your learning progress and statistics.

**Progress Over Time**

**Lesson Completion**

**Current Streak**

5 days 🔥