LIFE SKILL LUMINATE

A MINI-PROJECT REPORT

Submitted by

SAROSHMI B 211701047

VARSHINI KARTHIKEYAN 211701058

in partial fulfilment for the course

CD19651 Mini Project

for the degree of

BACHELOR OF ENGINEERING in COMPUTER SCIENCE AND DESIGN

RAJALAKSHMI ENGINEERING COLLEGE
RAJALAKSHMI NAGAR
THANDALAM
CHENNAI - 602 105

MAY 2024

RAJALAKSHMI ENGINEERING COLLEGE CHENNAI - 602105

BONAFIDE CERTIFICATE

Certified that this project report "LIFE SKILL LUMINATE" is the bonafide work of "SAROSHMI B (211701047), VARSHINI KARTHIKEYAN (211701058)" who carried out the project work for the subject CD19651 – Mini Project under my supervision.

SIGNATURE			SIGNATURE	
Prof. Uma Ma	aheshwar Rao		Mr. Gunasekar S	
Head of the Department			M.Tech.,(Ph.D).,	
Associate Prof	fessor		Supervisor	
Department of Computer Science and			Assistant Professor (SG)	
Design			Department of Computer Science and	
Rajalakshmi	Engineering	College	Design	
Chennai - 602	105		Rajalakshmi Engineering College	
			Chennai - 602105	

Submitted to Project and Viva Voce Examination for the subject

CD16651 – Mini Project held on ______.

Internal Examiner

External Examiner

ABSTRACT

LifeSkillLuminate presents a pioneering online platform tailored exclusively for individuals with autism, focusing on teaching and practicing essential life skills through engaging animation videos and interactive quizzes. The platform's primary goal is to provide a structured and enjoyable learning experience that fosters independence and confidence in daily living tasks.

The core feature of LifeSkillLuminate is its library of meticulously designed animation videos covering basic life skills such as grocery shopping, money management, cooking, and more.Following each video, users are seamlessly transitioned into a series of interactive 2D quizzes that serve as simulated real-life scenarios.

These quizzes offer users the opportunity to apply the concepts learned in the videos through hands-on practice. By presenting challenges like selecting items at a virtual grocery store or counting money for a purchase, users can reinforce their understanding and build proficiency in essential life skills. Each quiz is designed to be fun and engaging, providing immediate feedback to enhance learning outcomes.

While LifeSkillLuminate currently focuses solely on teaching and practicing modules without community features or progress tracking, its streamlined approach ensures a laser focus on skill acquisition. By combining captivating animation videos with interactive quizzes, the platform delivers a highly effective learning experience that promotes independence and self-sufficiency in individuals with autism.

LifeSkillLuminate represents a significant step forward in leveraging technology to support the unique learning needs of individuals with autism, providing a valuable resource for enhancing essential life skills in a user-friendly and accessible format.

ACKNOWLEDGEMENT

Initially we thank the Almighty for being with us through every walk of our life and showering his blessings through the endeavour to put forth this report. Our sincere thanks to our Chairman Mr.S.Meganathan, B.E., F.I.E., our Vice Chairman Mr. Abhay Shankar Meganathan, B.E., M.S., and our respected Chairperson Dr. (Mrs.) Thangam Meganathan, Ph.D., for providing us with the requisite infrastructure and sincere endeavouring in educating us in their premier institution.

Our sincere thanks to **Dr. S.N.Murugesan, M.E., Ph.D.,** our beloved Principal for his kind support and facilities provided to complete our work in time. We express our sincere thanks to our **Prof. Uma Maheshwar Rao** Associate Professor and Head of the Department of Computer Science and Design for his guidance and encouragement throughout the project work. We convey our sincere thanks to our internal guide and Project Coordinator, **Mr.S.Gunasekar, M.Tech., (PhD).,** Department of Computer Science and Design, Rajalakshmi Engineering College for his valuable guidance throughout the course of the project.

SAROSHMI B (211701047)

VARSHINI KARTHIKEYAN (211701058)

TABLE OF CONTENTS

CHAPTER NO.		TITLE PA	GE NO.
	ABS	ΓRACT	iii
1.	INT	RODUCTION	1
	1.1	INTRODUCTION	1
	1.2	OBJECTIVE	2
2.	LITERATURE REVIEW		
3.	EXIS	SITNG SYSTEM	10
		3.1 SYSTEM DESIGN	10
		3.2 LIMITATIONS	11
4.	PRO	POSED SYSTEM	12
		4.1. SYSTEM DESIGN	14
		4.2 ADVANTAGES	17
5.	RES	ULT	19
6.	CON	CLUSION AND FUTURE ENHANCEMENTS	20
7.	OUTPUT SCREENSHOTS		
	REFERENCES		

INTRODUCTION

1.1 Introduction

In a world where independence is often synonymous with success and fulfillment, individuals with autism face unique challenges in achieving autonomy in their daily lives. Simple tasks that many take for granted, such as grocery shopping, managing finances, or cooking a meal, can present significant hurdles for individuals on the autism spectrum. These challenges can not only hinder their ability to lead independent lives but also impact their sense of self-worth and inclusion within society.

Recognizing the critical importance of addressing these barriers to independence, our project, "LifeSkillLuminate", is dedicated to empowering autistic individuals by providing them with the tools and resources they need to navigate everyday life with confidence and competence. Through a combination of engaging animation videos and interactive quizzes, LifeSkillLuminate offers a structured and supportive learning environment tailored specifically to the needs of individuals with autism.

At the heart of our project lies a deep understanding of the unique learning styles and sensory sensitivities of individuals on the autism spectrum. We recognize that traditional methods of instruction may not always be effective for this population, which is why we have developed a series of captivating animation videos that are visually stimulating and easy to understand. These videos cover a range of essential life skills, breaking down complex tasks into manageable steps and providing clear, step-by-step guidance.

But our commitment to empowering autistic individuals goes beyond just teaching basic life skills. We understand that true independence requires not only the acquisition of practical skills but also the confidence to apply them in real-world situations. That's why our platform includes interactive quizzes that simulate everyday scenarios, allowing users to practice and reinforce their skills in a safe and controlled environment. By providing immediate feedback and opportunities for hands-on learning, these quizzes help build confidence and competence, paving the way for greater independence and autonomy.

Through LifeSkillLuminate, we aim to bridge the gap between the aspirations of individuals with autism and the everyday realities they face. By equipping them with the skills and confidence they need to tackle life's challenges head-on, we believe that we can help break down barriers and empower autistic individuals to live life to the fullest, just like anyone else. Ultimately, our goal is not just to teach life skills, but to foster a sense of empowerment and inclusion, ensuring that every individual, regardless of their abilities, has the opportunity to thrive and succeed.

1.2 Objective

The primary objective of our project, LifeSkillLuminate, is to create a comprehensive and user-friendly platform that supports the unique learning needs of individuals with autism, ultimately empowering them to lead independent, fulfilling, and meaningful lives. We aim to address the unique challenges faced by individuals on the autism spectrum in navigating everyday tasks that are often taken for granted by neurotypical individuals.

Specifically, our objectives include:

- 1. Facilitating Skill Acquisition: We seek to facilitate the acquisition of practical life skills such as grocery shopping, cooking, managing finances, and using public transportation through engaging animation videos and interactive quizzes. By breaking down complex tasks into manageable steps and providing clear, step-by-step guidance, we aim to make these skills more accessible and attainable for individuals with autism.
- 2. **Fostering Confidence and Competence**: We aim to foster confidence and competence in individuals with autism by providing opportunities for hands-on learning and practice in a safe and supportive environment. Through interactive quizzes that simulate real-life scenarios, users can apply the skills they've learned and receive immediate feedback, helping to build confidence and reinforce learning outcomes.
- 3. Promoting Independence and Autonomy: Our ultimate goal is to promote independence and autonomy among autistic individuals, enabling them to lead fulfilling and self-directed lives. By equipping them with the skills and confidence they need to navigate everyday tasks independently, we aim to reduce reliance on external support systems and empower individuals to live life on their own terms.

- 4. Enhancing Quality of Life: We seek to enhance the overall quality of life for individuals with autism by improving their ability to engage with and participate in everyday activities. By addressing barriers to independence and promoting skill development, we aim to empower individuals to overcome challenges and maximize their potential for personal growth and fulfillment.
- 5. **Promoting Inclusion and Empowerment**: Through our project, we aim to promote greater inclusion and empowerment for individuals with autism within society. By providing access to tailored learning resources and fostering a sense of competence and self-efficacy, we seek to challenge stereotypes and promote acceptance of neurodiversity, ensuring that individuals with autism are valued and respected members of their communities.

LITERATURE REVIEW

In the realm of special education, catering to the unique learning needs of individuals with autism spectrum disorders (ASD) has garnered increasing attention. Among the myriad challenges faced by individuals with ASD, deficits in social skills and daily living skills are particularly prominent, impacting various facets of their lives including academic achievement, interpersonal relationships, and independent living. Recognizing the significance of addressing these challenges, researchers and educators have endeavored to develop innovative interventions and educational resources aimed at enhancing the social and functional abilities of individuals with autism. This literature survey seeks to explore a diverse array of studies focusing on different aspects of education and intervention strategies for individuals with autism, drawing insights from research spanning e-Learning initiatives, social skills development, daily living skills training, and interactive interface design. By delving into the findings and methodologies of these studies, this survey aims to inform the development of Project LifeSkillLuminate, an educational website tailored to young individuals with autism, which utilizes YouTube video tutorials and interactive 2D simulation quizzes to impart essential life skills. Through a comprehensive examination of the literature, this survey endeavors to elucidate the current landscape of educational interventions for individuals with autism and provide a foundation for the development of effective and engaging educational resources.

[1] This study compared the effectiveness of static picture prompting to video prompting when used as precursors for teaching daily living and motor skills to three individuals with autism spectrum disorders. The video prompting intervention was delivered on an iPad. Participants learned three out of six different tasks, which included throwing a ball overhand, walking backward, performing jumping jacks, washing a mirror, cutting a banana, and brushing teeth. The effects of the instructional methods were compared and assessed using an alternating treatment design. Results show that video prompting and static pictures are both effective in teaching correct independent skill responses to children with ASD. Although one participant showed greater gains on one of the three tasks using static pictures, video prompting resulted in overall faster acquisition.

- [2] Research on video modeling has typically utilized either competent peer models or self-models engaging in criterion performances. Although both methods have demonstrated utility in achieving skill acquisition, each has potential disadvantages. The current research utilized a multiple probe design across tasks and replicated across participants in order to demonstrate the efficacy of an instructional video modeling technique to teach functional living skills to three children with autism. Five tasks were selected. Prior to the development of each training video, task analyses were created. Videotapes were developed from the participant's viewing perspective, that is, as the participant would be viewing the task. Instructional video modeling was effective in promoting skill acquisition across all three children and maintained during the postvideo phase and a 1-month follow up.
- [3] We investigated the efficacy of pictorial self-management to teach daily living skills to 3 low-functioning children with autism. Stimulus and response generalization, stimulus control of self-management materials, and maintenance of behavior change were also assessed. Results showed that children with autism could successfully use pictures to manage their behavior in the absence of a treatment provider, generalize their behavior across settings and tasks, and maintain behaviors at follow-up. In addition, when compared to baseline, all children showed a substantial decrease in stereotypic behaviors. When picture order was manipulated in stimulus control probes, the children followed the new picture sequence, suggesting that the pictures were controlling their behavior. Further, a savings effect was demonstrated, in that 2 subjects reached criterion on second and third behaviors within less than 25% of original training time.
- [4] Nowadays education with technology is highly preferable for children as children are way more engrossed to gadgets. The use of devices, in educational sectors, is rising day by day. Children with autism are one of the most benefited parts in this area. If the gadget is a touchscreen assistive tool, then the interest of an autistic child is increased. Devising and designing an interactive interface system for autism children with the help of participatory interface design process that has been guided with autistic children before and encouraged us to develop the touchscreen assistive learning numeracy and calculation system, named Play and Learn Number(PLaN). The application mainly focused on teaching numeracy and calculation cause without having a basic idea on numeracy and calculation regular life is hard to move on. We also focused on user interface design with some latest approaches like dot

matching and puzzling which will be applied in the application. The PLaN application is also usable for teachers and parents to train and educate the autism children; it will also help to grow their interest in learning as several reinforcements are included in it. It is assumed that after establishing of this application, the autistic child will be able to learn more than before. This application will also help the children to memorize and recognize the numbers with or without sequence through the animated pictures and interactive learning application. Finally, this paper described the user interface design process broadly for forming PLaN to teach basic numeracy and calculations to children with autism.

[5] Social development is one of the most critical developmental areas for human beings. Deficits in social skills may negatively impact several essential domains including academic achievement, interpersonal relationships, behavior, mental health, and adult life outcome. Individuals with autism present with core deficits in social skills. Without supports and effective interventions to enhance social skills, children with autism often struggle to obtain social competence, and may experience challenges in the school, home, and community settings. With effective interventions, children with autism can learn essential social skills that can help to mitigate deficits and strengthen social competence. After a brief review of various theories of social development, this article seeks to present the constructs of social competence, social skills, and adaptive skills in relatable and clear language for educators. Finally, the article will review several evidence-based interventions designed to enhance social skills.

Combining the insights from the studies on teaching daily living skills to children with autism in unsupervised settings through pictorial self-management[3], teaching daily living skills to children with autism through instructional video modeling[2], and the effectiveness of static pictures versus video prompting for teaching functional life skills to students with autism spectrum disorders[1], presents a comprehensive understanding of innovative interventions aimed at enhancing the functional abilities of individuals with autism spectrum disorders (ASD). These studies collectively underscore the significance of utilizing visual aids and interactive methods to facilitate skill acquisition and promote independence among individuals with ASD. The research on pictorial self-management demonstrates the efficacy of using pictures to teach daily living skills, emphasizing the importance of visual prompts in promoting behavior management and generalization across settings. Similarly, instructional video modeling emerges as a powerful tool for teaching functional living skills to children with

autism, with findings indicating sustained skill acquisition and maintenance over time. The comparison between static pictures and video prompting reveals that both methods are effective in teaching correct skill responses to children with ASD, albeit with differences in the rate of skill acquisition. While static pictures may offer advantages in certain contexts, such as slower-paced learning environments, video prompting demonstrates overall faster acquisition and potential for broader applicability. These studies collectively highlight the value of leveraging visual aids and interactive technologies in educational interventions for individuals with autism, underscoring the need for tailored approaches to meet the diverse learning needs of this population. Integrating these insights into the development of Project LifeSkillLuminate, an educational website designed to teach life skills to young individuals with autism through YouTube video tutorials and interactive 2D simulation quizzes, holds promise for enhancing the educational experiences and outcomes of individuals with ASD, fostering independence, and promoting functional competence in daily life activities.

The insights gained from the literature paper on interactive interface design for learning numeracy and calculation for children with autism[4] offer valuable input for enhancing the effectiveness and accessibility of Project LifeSkillLuminate, an educational website . This study underscores the increasing preference for educational technology among children, particularly those with autism, highlighting the potential benefits of touchscreen assistive tools in engaging learners. By adopting a participatory interface design process guided by input from autistic children, the study emphasizes the importance of user-centered design in creating educational applications tailored to the unique needs and preferences of individuals with autism. The development of the touchscreen assistive learning numeracy and calculation system, named Play and Learn Number (PLaN), serves as a compelling example of how interactive interfaces can be effectively designed to facilitate learning for children with autism. The PLaN application focuses on teaching numeracy and calculation skills, essential for navigating daily life activities, and incorporates innovative approaches such as dot matching and puzzling to enhance engagement and comprehension. Moreover, the application's usability for teachers and parents underscores its potential as a versatile tool for supporting learning both in formal and informal settings. By providing animated pictures and interactive learning activities, the PLaN application aims to promote skill acquisition and retention while fostering interest and motivation in learning. Integrating principles of user interface design from this study into Project LifeSkillLuminate holds promise for enhancing the user experience and educational outcomes of individuals with autism. By prioritizing accessibility, engagement, and user empowerment, Project LifeSkillLuminate can leverage interactive interfaces to create a dynamic and inclusive learning environment, empowering individuals with autism to develop essential life skills and achieve greater independence in daily life activities. Through thoughtful integration of interactive elements and user feedback, Project LifeSkillLuminate can serve as a valuable resource for individuals with autism, equipping them with the tools and knowledge needed to thrive in an increasingly digital world.

The insights gleaned from the literature paper on developing social skills and social competence in children with autism[5] provide invaluable guidance for enriching the content and approach of Project LifeSkillLuminate. The paper underscores the critical importance of social development in the overall well-being and success of individuals, particularly those with autism spectrum disorder (ASD). It elucidates how deficits in social skills can significantly impact various aspects of life, including academic achievement, interpersonal relationships, and mental health outcomes. By acknowledging the unique challenges faced by individuals with autism in navigating social interactions, the paper highlights the urgent need for effective interventions to enhance social skills and promote social competence. Drawing on various theories of social development, the paper provides a comprehensive understanding of the constructs of social competence, social skills, and adaptive skills in relatable and clear language for educators. This foundational knowledge serves as a valuable resource for informing the design and implementation of interventions aimed at fostering social development in individuals with autism. Additionally, the paper reviews several evidence-based interventions designed to enhance social skills, offering practical strategies and approaches for educators and practitioners working with individuals with autism. By integrating principles and strategies from this paper into Project LifeSkillLuminate, the educational website can effectively address the social development needs of individuals with autism, providing targeted instruction and support to enhance their social skills and promote social competence. Through engaging and interactive content, Project LifeSkillLuminate can create opportunities for individuals with autism to practice and develop their social skills in a safe and supportive online environment. By leveraging evidence-based interventions and best practices in social skills training, Project LifeSkillLuminate has the potential to empower individuals with autism to cultivate meaningful connections, build relationships, thrive in social settings. and

The literature survey encompassed five studies, each offering unique insights into interventions

and educational strategies for individuals with autism spectrum disorder (ASD). [5]"Developing Social Skills and Social Competence in Children with Autism" elucidated the importance of social development and the impact of deficits in social skills on various life domains. It provided a foundational understanding of social competence, social skills, and adaptive skills, along with evidence-based interventions to enhance social skills. [3] "Teaching daily living skills to children with autism in unsupervised settings through pictorial selfmanagement" showcased the efficacy of pictorial self-management in teaching daily living skills, emphasizing the importance of visual prompts and independence in behavior management. [2] "Teaching Daily Living Skills to Children with Autism Through Instructional Video Modeling" demonstrated the effectiveness of instructional video modeling in promoting skill acquisition and maintenance, highlighting the value of visual demonstrations in skill learning.[1] "Effectiveness of static pictures vs. video prompting for teaching functional life skills to students with autism spectrum disorders" compared static pictures and video prompting for teaching life skills, revealing both methods' effectiveness and the potential advantages of video prompting in faster skill acquisition.[4] "Interactive interface design for learning numeracy and calculation for children with autism" emphasized the importance of interactive interfaces and user-centered design in educational applications, showcasing the development of a touchscreen assistive learning system to teach numeracy and calculation skills.

In conclusion, the literature survey provided a comprehensive overview of interventions and educational approaches tailored to individuals with ASD. It underscored the importance of addressing deficits in social skills and daily living skills through evidence-based interventions and innovative educational technologies. By integrating insights from these studies into our Project LifeSkillLuminate, an educational website that aims at teaching life skills to individuals with autism, we can create a dynamic and inclusive learning environment that promotes skill acquisition, independence, and social competence. Through engaging content, interactive interfaces, and evidence-based strategies, Project LifeSkillLuminate has the potential to empower individuals with autism to thrive and succeed in various life domains.

EXISTING SYSTEM

3.1 SYSTEM DESIGN

3.1.1 Sequence flow diagram

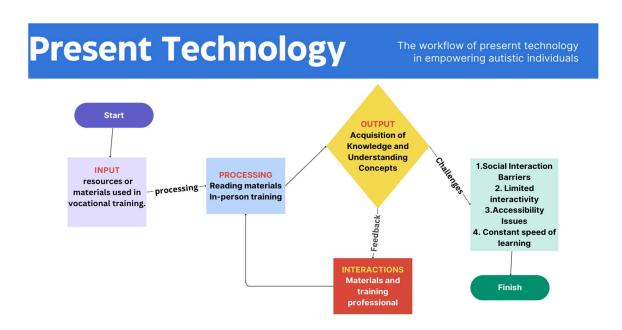


Fig 3.1

3.1.2 Use case diagram

The use case diagram for the existing autism website system delineates the interactions between users and the platform's functionalities. It outlines actions such as user registration, browsing educational resources, purchasing materials, and accessing support materials. Through interconnected use cases, the diagram illustrates how users engage with the website's features, providing a comprehensive overview of the existing system's functionality and user interactions.

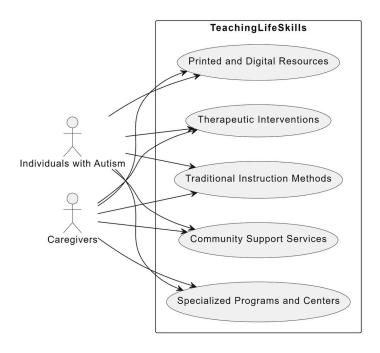


Fig 3.2

3.1.3 Component Diagram

The component diagram for the existing autism website system illustrates the high-level architecture and components of the platform. Through interconnected components, the diagram showcases the system's structural elements and their interactions, providing a visual representation of the website's underlying infrastructure and technologies.

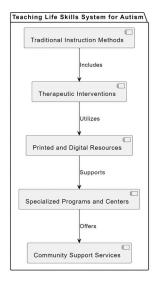


Fig 3.3

3.1.4 Class diagram

The class diagram for the existing system of the autism website outlines the structure of its object-oriented design. It depicts classes such as Digital Resources, Support Services.

Through a hierarchical representation of classes and their associations, the diagram provides insights into the system's data model and key entities.

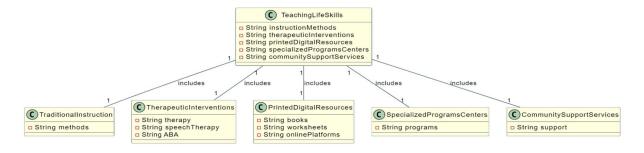


Fig 3.4

3.1.5 Sequence Diagram

The sequence diagram for the existing system of the autism website illustrates the flow of interactions between various components during user actions. It delineates the chronological order of messages exchanged between objects, such as user requests and system responses. Through sequential diagrams, the system's behavior during processes like user registration, content downloads, and interaction with the platform is visualized.

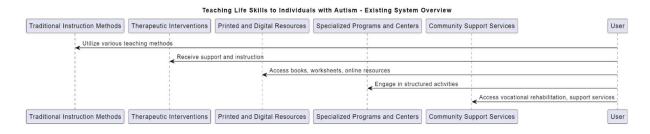


Fig 3.5

3.2 LIMITATIONS

In considering the existing system within the domain of teaching life skills to individuals with autism, it's important to recognize the diverse range of approaches and resources available, as well as the specific challenges and limitations that may exist. Here's an overview of the existing system and some of its limitations:

- 1. **Traditional Instruction Methods**: Historically, life skills instruction for individuals with autism has often relied on traditional teaching methods, such as one-on-one instruction, group sessions, or written materials. While these approaches may be effective for some learners, they may not always be accessible or engaging for individuals with autism, who may have unique learning styles and sensory sensitivities.
- 2. **Therapeutic Interventions**: Many individuals with autism receive support and instruction through various therapeutic interventions, such as occupational therapy, speech therapy, and applied behavior analysis (ABA). These interventions may include targeted skill-building activities and strategies to address specific challenges related to daily living skills.
- 3. **Printed and Digital Resources**: There is a wide range of printed and digital resources available for teaching life skills to individuals with autism, including books, worksheets, and online platforms. These resources may cover topics such as personal hygiene, household chores, money management, and social skills, providing guidance and support for both individuals and caregivers.
- 4. **Specialized Programs and Centers**: Some communities offer specialized programs and centers specifically designed to support individuals with autism in developing life skills. These programs may include structured activities, socialization opportunities, and vocational training to help individuals build independence and prepare for adulthood.
- 5. Community Support Services: In addition to formal instruction and programming, individuals with autism may access community support services, such as vocational rehabilitation, supported employment, and independent living assistance. These services aim to provide ongoing support and resources to help individuals achieve greater independence and integration into society.

While these existing systems and resources play a valuable role in supporting individuals with autism in developing life skills, there are often gaps and limitations that need to be addressed. These may include limited accessibility, lack of individualization, and insufficient opportunities for practice and generalization of skills in real-world settings.

PROPOSED SYSTEM

4.1 SYSTEM DESIGN

4.1.1 Block diagram

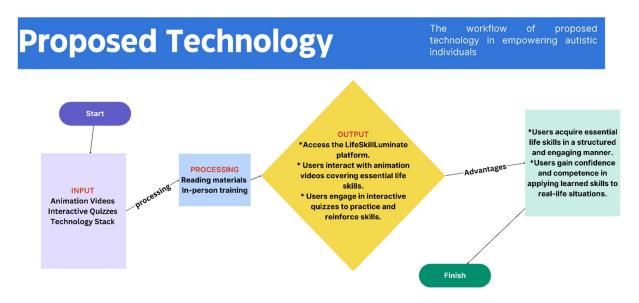


Fig 4.1

4.1.2 Use case diagram

Use cases capture the main functionalities and interactions of LifeSkillLuminate, Fig 3.1 provides a comprehensive overview of how users engage with the system to learn essential life skills. It illustrates the various interactions and relationships between users and the system.

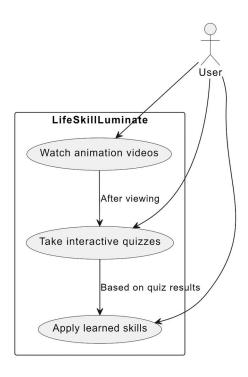


Fig 4.2

4.1.3 Architecture Diagram

The components shown in Fig.3.2 collectively form the user interface, quiz, and video functionalities of LifeSkillLuminate, providing users with an engaging and accessible platform for learning essential life skills. The architecture diagram for LifeSkillLuminate illustrates the high-level structure and components of the platform's system design Each component plays a distinct role in delivering the platform's functionalities. Through this visual representation, the architecture diagram provides a comprehensive overview of the system's design principles, scalability, and extensibility, facilitating effective communication and collaboration among development teams.

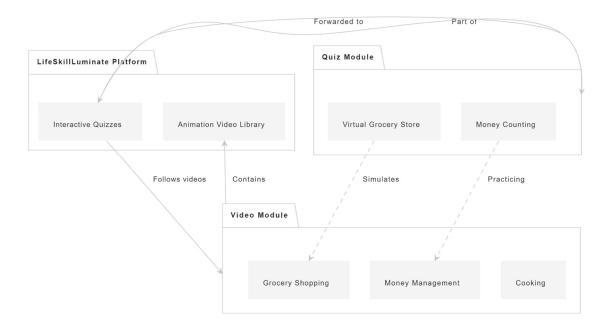


Fig 4.3

4.1.4 Sequence diagram

The sequence diagram for LifeSkillLuminate, Fig 3,3, illustrates the interactions between users and the system as they navigate through the platform's features. It outlines the sequential flow of events, starting from user interactions with the user interface components to the backend processing of requests and responses. Each step in the sequence represents a specific action or operation performed by the user or the system, showcasing the dynamic exchange of information and functionality within the platform. Through this visual representation, the sequence diagram provides insights into the order of operations and the dependencies between different components, helping to ensure a smooth and intuitive user experience.

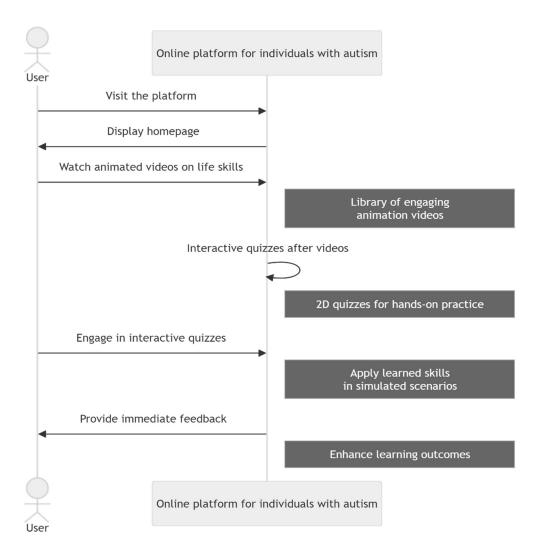


Fig 4.4

4.2 ADVANTAGES

LifeSkillLuminate, seeks to complement and enhance the existing system by providing a user-friendly, interactive, and customizable platform specifically tailored to the needs of individuals with autism. By leveraging technology and simulation-based learning, we aim to fill gaps in traditional instruction methods and provide individuals with autism with the tools and resources they need to develop essential life skills and achieve greater independence and autonomy.

Our proposed system, LifeSkillLuminate, represents an innovative approach to teaching essential life skills to individuals with autism through a user-friendly online platform. Leveraging cutting-edge technology and evidence-based practices, LifeSkillLuminate

aims to address the unique learning needs of individuals with autism by providing engaging and interactive learning experiences tailored to their specific abilities and preferences.

Advantages of the Proposed System:

- 1. **Animation Videos**: LifeSkillLuminate will feature a library of captivating animation videos covering a range of essential life skills, including grocery shopping, cooking, managing finances, using public transportation, and personal hygiene. These videos will be designed to be visually appealing, easy to understand, and accessible to individuals with autism, incorporating clear visuals, simple language, and step-by-step instructions.
- 2. **Interactive Quizzes**: Following each animation video, users will have the opportunity to engage in interactive quizzes that simulate real-life scenarios related to the skills they have just learned. These quizzes will be designed to be fun and engaging, allowing users to practice and reinforce their skills in a safe and supportive environment. Immediate feedback will be provided to help users improve.
- 3.**Technology Stack:**LifeSkillLuminate will be built using modern web technologies, making it accessible across a range of devices, including desktop computers, laptops, tablets, and smartphones. The platform will utilize responsive design principles to ensure a seamless and consistent user experience across different screen sizes and devices.

Overall, our proposed system, LifeSkillLuminate, represents a groundbreaking approach to teaching essential life skills to individuals with autism, leveraging technology and innovation to create a supportive and empowering learning environment. By providing engaging animation videos, interactive quizzes, and customizable learning experiences, LifeSkillLuminate aims to empower individuals with autism to develop the skills and confidence they need to lead independent and fulfilling lives.

RESULT

The result of the LifeSkillLuminate project is a comprehensive and user-friendly platform that empowers individuals with autism to develop essential life skills and achieve greater independence in their daily lives. Through engaging animation videos, interactive quizzes, and customizable learning experiences, LifeSkillLuminate provides a structured and supportive environment for users to acquire practical skills such as grocery shopping, cooking, managing finances, and using public transportation. By breaking down complex tasks into manageable steps and providing clear guidance and feedback, the platform helps users build confidence and competence in navigating real-world scenarios, fostering a sense of empowerment and self-sufficiency.

Furthermore, LifeSkillLuminate promotes inclusivity and accessibility by offering features such as text-to-speech functionality, high contrast visuals, and keyboard navigation support, ensuring that individuals with diverse needs can fully participate in the learning process. The platform also includes robust data security and privacy measures to protect user information and build trust, enhancing the overall user experience and promoting a safe and secure environment for learning and growth. With its innovative approach and user-centric design, LifeSkillLuminate represents a significant step forward in leveraging technology to support the unique learning needs of individuals with autism, ultimately enabling them to lead independent, fulfilling, and meaningful lives.

Overall, the result of the LifeSkillLuminate project is a transformative solution that addresses the challenges faced by individuals with autism in acquiring essential life skills. By providing accessible, interactive, and customizable learning experiences, the platform empowers users to overcome barriers, build confidence, and achieve their full potential. Through ongoing iteration and refinement, LifeSkillLuminate continues to evolve as a valuable resource for individuals with autism, caregivers, educators, and professionals, driving positive impact and promoting greater inclusion and empowerment within society.

CONCLUSION AND FUTURE ENHANCEMENT

In conclusion, LifeSkillLuminate represents a significant advancement in addressing the unique learning needs of individuals with autism, providing a supportive and empowering platform for developing essential life skills. Through its innovative approach, the project has successfully leveraged technology to create engaging animation videos, interactive quizzes, and customizable learning experiences that cater to diverse abilities and preferences. The platform's user-centric design, accessibility features, and robust data security measures ensure inclusivity, privacy, and safety, fostering a positive and enriching learning environment for users.

Looking ahead, there are several opportunities for future enhancement and expansion of LifeSkillLuminate. One potential avenue is the integration of additional life skills modules and resources to cover a broader range of topics and areas of interest. This could include modules on social skills, vocational training, emotional regulation, and self-advocacy, providing users with a more comprehensive toolkit for navigating various aspects of daily life. Furthermore, incorporating community engagement features such as forums, support groups, and peer mentoring programs could enhance social interaction, collaboration, and mutual support among users, caregivers, and professionals.

Additionally, ongoing research and collaboration with experts in the field of autism education and technology could lead to further improvements in the platform's effectiveness, usability, and accessibility. This may involve conducting user feedback sessions, usability studies, and pilot programs to gather insights and refine the platform based on real-world usage and feedback. By continuously iterating and evolving, LifeSkillLuminate has the potential to make an even greater impact in empowering individuals with autism to lead independent, fulfilling, and meaningful lives, while also promoting greater awareness, acceptance, and inclusion within society.

OUTPUT

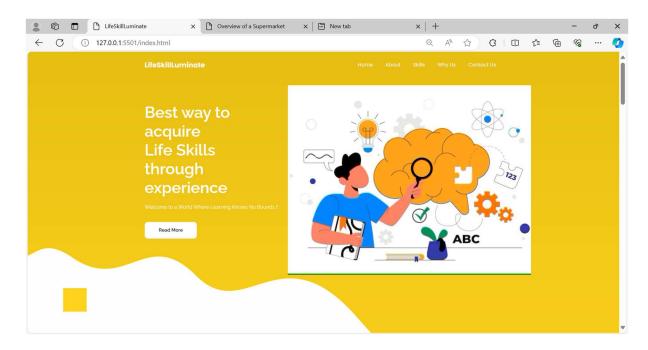


Fig 7.1



Fig 7.2

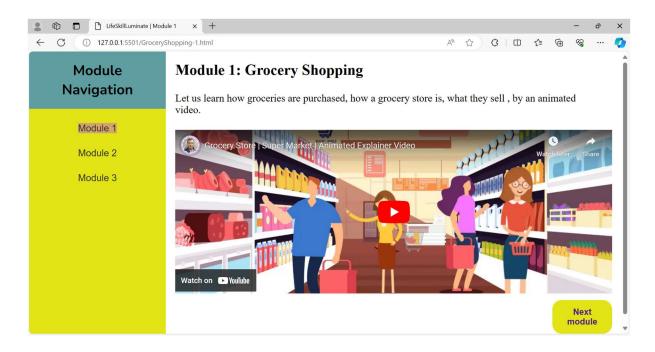


Fig 7.3

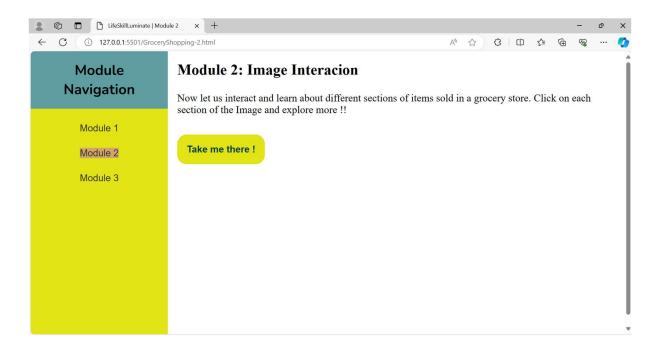


Fig 7.4

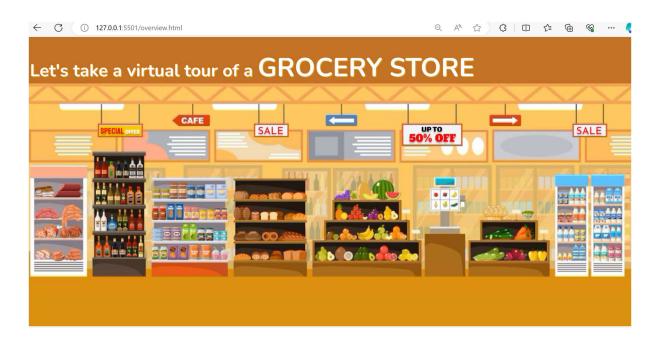


Fig 7.5

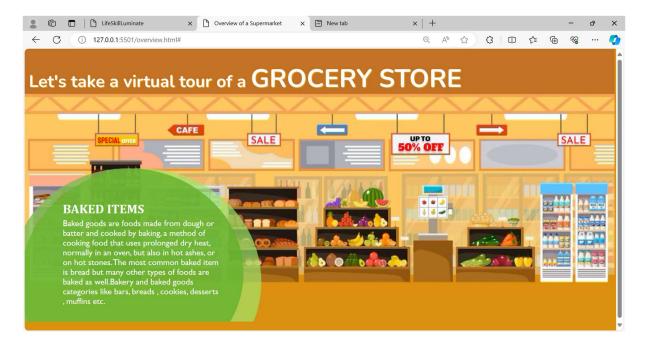


Fig 7.6

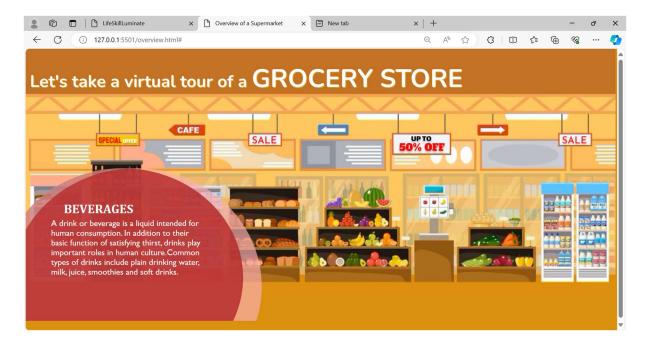


Fig 7.7

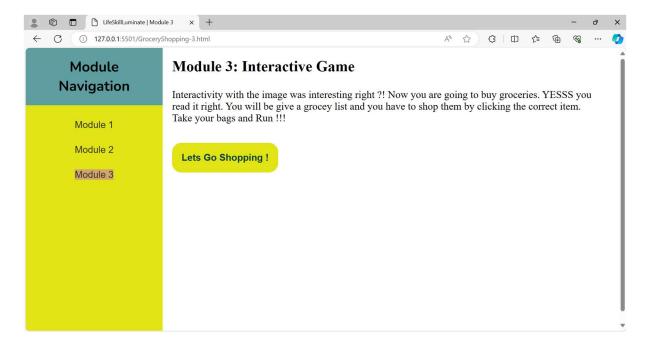


Fig 7.8

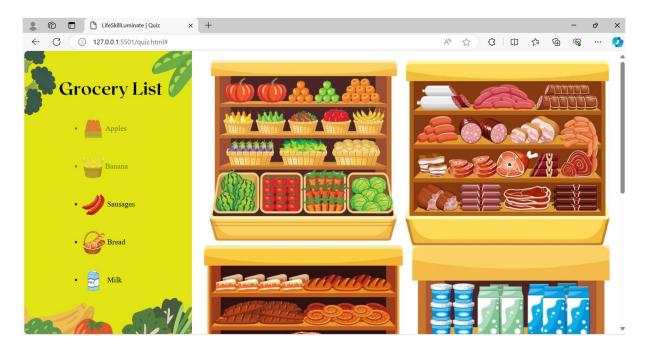


Fig 7.9

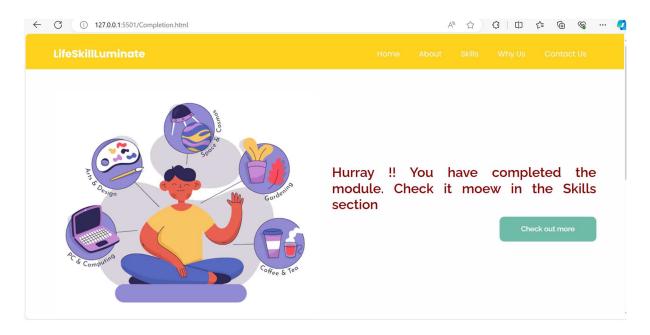


Fig 7.10

REFERENCES

[1] "Effectiveness of static pictures vs. video prompting for teaching functional life skills to students with autism spectrum disorders", Ryan O. Kellems, Kaitlyn Frandsen, Teresa A. Cardon, Nov 2017

https://www.tandfonline.com/doi/full/10.1080/1045988X.2017.1393790?nee dAccess=true

[2] "Teaching Daily Living Skills to Children with Autism Through Instructional Video", Robin Shipley-Benamou, John R. Lutzker, and Mitchell Taubman

https://journals.sagepub.com/doi/abs/10.1177/10983007020040030501

[3] "Teaching daily living skills to children with Autism in unsupervised settings through pictorial self-management", Karen L. Pierce, Laura Schreibman.

https://onlinelibrary.wiley.com/doi/abs/10.1901/jaba.1994.27-471

[4] "Interactive interface design for learning numeracy and calculation for children with autism", Afshara Tashnim, Samiha Nowshin, Fatema Akter, Amit Kumar Das, Oct 2017

https://ieeexplore.ieee.org/abstract/document/8250507

[5] "Developing Social Skills and Social Competence in Children with Autism", Tracey Silveira-Zaldivara, Gül Özerkb, Kamil Özerk, Jan 2021

https://www.duo.uio.no/bitstream/handle/10852/88813/SOCIAL%2bSKILL S%2bAND%2bCHILDREN%2bWITH%2bASD.pdf?sequence=2&isAllow ed=y