Complex Problem-Solving Self-Assessment Form

1	Name of the Student	K Aaron
2	Roll Number	25951A6601
3	Branch and Section	CSE-(AI&ML) - A
4	Program	B. Tech
5	Course Name	Front-End Web Development
6	Course Code	ACSE04
7	Please tick (✓) relevant Engineering Competency (ECs) Profiles	

EC	Profiles	(✓)
EC 1	Ensures that all aspects of an engineering activity are soundly based on fundamental principles - by diagnosing, and taking appropriate action with data, calculations, results, proposals, processes, practices, and documented information that may be ill-founded, illogical, erroneous, unreliable or unrealistic requirements applicable to the engineering discipline	✓
EC 2	Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models.	✓
EC 3	Support sustainable development solutions by ensuring functional requirements, minimize environmental impact and optimize resource utilization throughout the life cycle, while balancing performance and cost effectiveness.	
EC 4	Competently addresses complex engineering problems which involve uncertainty, ambiguity, imprecise information and wide-ranging or conflicting technical, engineering and other issues.	✓
EC 5	Conceptualises alternative engineering approaches and evaluates potential outcomes against appropriate criteria to justify an optimal solution choice.	✓

	EC 6	Identifies, quantifies, mitigates and manages technical, health, environmental, safety, economic and other contextual risks associated to seek achievable sustainable outcomes with engineering application in the designated engineering discipline.	
	EC 7	Involve the coordination of diverse resources (and for this purpose, resources include people, money, equipment, materials, information and technologies) in the timely delivery of outcomes	
	EC 8	Design and develop solution to complex engineering problem considering a very perspective and taking account of stakeholder views with widely varying needs.	✓
	EC 9	Meet all level, legal, regulatory, relevant standards and codes of practice, protect public health and safety in the course of all engineering activities.	
	EC 10	High level problems including many component parts or sub-problems, partitions problems, processes or systems into manageable elements for the purposes of analysis, modelling or design and then re-combines to form a whole, with the integrity and performance of the overall system as the top consideration.	✓
	EC 11	Undertake CPD activities to maintain and extend competences and enhance the ability to adapt to emerging technologies and the ever-changing nature of work.	✓
	EC 12	Recognize complexity and assess alternatives in light of competing requirements and incomplete knowledge. Require judgement in decision making in the course of all complex engineering activities.	✓
8	Please tick (✓) relevant Course Outcomes (COs) Covered		
	CO	**Course Outcomes**	**(✓)**
	CO 1	Describe language basics like alphabet, strings, grammars, productions, derivations, and Chomsky hierarchy, construct DFA, NFA, and conversion of NFA to DFA, Moore and Mealy machines and interpret differences between them.	✓
	CO 2	Recognize regular expressions, formulate, and build equivalent finite automata for various languages.	✓
	CO 3	Identify closure, and decision properties of the languages and prove the membership.	✓
	CO4	Demonstrate context-free grammars, check the ambiguity of the grammar, and design equivalent PDA to accept the context-free languages.	
	CO 5	Uses mathematical tools and abstract machine models to solve complex problems.	✓
	CO 6	Analyze and distinguish between decidable and undecidable problems.	✓

9	Course ELRV Video Lectures Viewed	**Number of Videos**	**Viewing time in Hours**
		-	-
10	Justify your understanding of WK1	-	
11	Justify your understanding of WK2 – WK9	-	
12	How many WKs from WK2 to WK9 were implanted?	-	
	Mention them	-	

LIFE CANVAS

A Project Report submitted in

partial fulfilment of the

requirements for the award of the

degree of

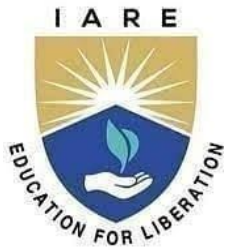
Bachelor of Technology in

CSE (Artificial Intelligence & Machine Learning)

By

K Aaron

25951A6601



Department of CSE (Artificial Intelligence & Machine Learning)

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad – 500 043, Telangana

November, 2025

DECLARATION

I certify that

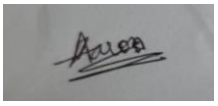
a. The work contained in this report is original and has been done by me under the guidance of my supervisor (s).

b. The work has not been submitted to any other Institute for any degree or diploma.

c. I have followed the guidelines provided by the Institute for preparing the report.

d. I have conformed to the norms and guidelines given in the Code of Conduct of the Institute.

e. Whenever I have used materials (data, theoretical analysis, figures, and text) from other sources, I have given due credit to them by citing them in the text of the report and giving their details in the references. Further, I have taken permission from the copyright owners of the sources, whenever necessary.



Place: Hyderabad

Signature of the Student

Date: 05-12-2025

CERTIFICATE

This is to certify that the project report entitled **Life Canvas** submitted by **K Aaron** to the Institute of Aeronautical Engineering, Hyderabad in partial fulfilment of the requirements for the award of the Degree Bachelor of Technology in **CSE - (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)** is a Bonafide record of work carried out by his guidance and supervision. The Contents of this report, in full or in parts, have not been submitted to any other Institute for the award of any Degree.

Supervisor **Head of the Department**

Date: 05-12-2025

Principal

APPROVAL SHEET

This project report entitled **Life Canvas** submitted by **K Aaron** is approved for the award of the Degree Bachelor of Technology in Branch **CSE (Artificial Intelligence & Machine Learning).**

Examiner **Supervisor(s)**

Principal

Date: 05-12-2025

Place: Hyderabad

ACKNOWLEDGEMENT

The satisfaction that accompanies the successful completion of any task would be incomplete without introducing the people who made it possible and whose constant guidance and encouragement crowns all efforts with success.

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I take this opportunity to express my deepest gratitude to one and all who directly or indirectly helped me in bringing this effort to present form.

ABSTRACT

ExamEase is an interactive, web-based platform designed to simplify exam preparation through an efficient and user-friendly front-end interface. This project focuses on developing a responsive and engaging learning environment using core web technologies such as **HTML5, CSS3, and JavaScript**. The aim of ExamEase is to provide students with an accessible digital space where they can practice subject-specific quizzes, track their progress, and receive instant feedback to enhance their academic readiness.

The platform incorporates an intuitive layout that enables smooth navigation and quick access to learning modules. Interactive elements such as dynamic quiz cards, progress bars, timers, and real-time score updates contribute to a more immersive learning experience. By applying modern design principles, including responsive layouts and clean visual hierarchies, ExamEase ensures compatibility across various devices such as smartphones, tablets, and desktop computers.

A key focus of the project is improving user engagement through thoughtfully designed UI/UX components. Visual consistency, color psychology, and minimalistic design elements were implemented to reduce cognitive load and keep learners focused on content. JavaScript-driven interactivity enhances the functionality of the platform by managing quiz logic, storing user progress, and delivering instant results without requiring back-end processes.

Overall, ExamEase demonstrates the practical application of front-end web development skills in creating a meaningful educational tool. It highlights the importance of usability, visual appeal, and interactivity in modern web applications, ultimately providing learners with a convenient and effective method for preparing for exams.

CONTENTS

CHAPTER 1 INTRODUCTION

1.1 Problem Statement

In today's fast-paced lifestyle, individuals struggle to manage tasks, track goals, and maintain daily motivation. Traditional methods like to-do lists, sticky notes, or scattered digital apps fail to provide an integrated system for real-time progress tracking, personalized goal management, and daily inspiration. As a result, people often feel overwhelmed, miss deadlines, and lack the motivation needed for consistent productivity.

Life Canvas aims to solve these challenges by introducing a **Dynamic Personal Dashboard** that consolidates tasks, goals, and motivational quotes in one visually intuitive platform. Despite the availability of several productivity apps, users still lack a lightweight, customizable, and engaging interface that adapts to their personal routines and keeps them motivated.

The platform provides features such as task organization, goal tracking, daily reflections, and dynamic motivational prompts. These help individuals maintain clarity, stay consistent, and develop a disciplined productivity habit. Therefore, a modern front-end solution like Life Canvas is essential for supporting personal organization and continuous self-improvement.

1.2 Introduction

Life Canvas is a dynamic, interactive, web-based personal productivity dashboard designed to help individuals manage daily tasks, track short-term and long-term goals, and stay motivated through personalized inspirational quotes. In an increasingly hectic lifestyle, maintaining productivity, staying organized, and finding daily encouragement can be challenging.

Life Canvas brings structure and clarity by offering three major components:

- **Task Manager** – for creating, editing, updating, and categorizing tasks.
- **Goal Tracker** – for setting measurable goals, monitoring milestones, and visualizing progress.
- **Motivational Quote Engine** – for generating uplifting quotes that boost morale throughout the day.

With a clean, responsive design and intuitive UI, Life Canvas provides users with a centralized space to visualize priorities, track achievements, and remain inspired. The dashboard transforms everyday planning into a simple, enjoyable, and meaningful activity, promoting balanced productivity and personal growth.

1.3 Requirements

1. Functional Requirements (Front-End)

1.1 Task Manager

- FR1: The interface must allow users to add tasks with categories, due dates, and priority levels.
- FR2: Users must be able to edit, update, and delete tasks.
- FR3: Tasks must visually indicate status (pending, completed, overdue).

- FR4: Client-side storage (Local Storage/Session Storage) must retain tasks across sessions.

1.2 Goal Tracker

- FR5: Users must be able to create short-term and long-term goals.
- FR6: The dashboard should visually show progress (bars, percentages, or icons).
- FR7: Users must be able to update milestones dynamically.

1.3 Motivational Quote Engine

- FR8: The dashboard must display a new quote dynamically each day or on refresh.
- FR9: Users must be allowed to save favorite quotes for later viewing.

1.4 Dashboard Overview

- FR10: The main screen must summarize tasks due, goals progress, and the daily quote.
- FR11: The interface must be fully interactive, with instant UI updates using JavaScript.

2. Non-Functional Requirements

- NFR1: Responsive interface optimized for mobile, tablet, and desktop.
- NFR2: Clear visual hierarchy and easy-to-navigate layout.
- NFR3: Fast loading speed and smooth UI transitions.
- NFR4: Consistent design system for colors, typography, and components.
- NFR5: Accessibility compliance with readable text and ARIA roles.
- NFR6: Reliable local storage for persistence.

1.4 Pre-requisites :

1. Technical Pre-requisites

- HTML5 for structure and UI layout
- CSS3 for responsive design, themes, and styling
- JavaScript for dashboard logic, dynamic content updates, and storage handling
- Knowledge of DOM manipulation
- Familiarity with responsive frameworks (optional)

2. Tool Pre-requisites

- Code editor (VS Code, Sublime, Atom)
- Modern browsers (Chrome, Edge, Firefox)
- Version control (Git/GitHub)
- UI planning tools like Figma (optional)

3. User Pre-requisites

- Basic understanding of creating tasks/goals
- Familiarity with reading dashboards and progress indicators
- Ability to use simple web interfaces

.

1.5 Technologies Used

1. **HTML5** – For dashboard structure and layout sections
2. **CSS3** – For styling cards, layouts, progress bars, and dashboard themes
3. **JavaScript** – For interactivity, dynamic quotes, task and goal logic
4. **JSON** – Used for storing quotes and sample goal structures
5. **Git & GitHub** – For version control and deployment
6. **Optional Add-ons**

- Local Storage for persistent data
- Chart.js for advanced goal visualization
- Tailwind/Bootstrap for rapid UI styling

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

Research on personal productivity tools emphasizes the impact of structured task management, goal setting, and motivational reinforcement. Behavioral studies reveal that dividing tasks into actionable segments improves focus and reduces procrastination. Visual indicators like progress bars and categories significantly enhance clarity and productivity.

Motivational psychology literature highlights the role of affirmations and positive cues in maintaining daily consistency. Digital quotes and prompts serve as cognitive reinforcements, helping users stay engaged and emotionally balanced.

Front-end technologies such as HTML5, CSS3, and JavaScript are commonly used in personal dashboards due to their ability to create responsive and customizable interfaces. LocalStorage is widely supported as an efficient method for user-specific data persistence without backend systems.

Life Canvas aligns with these findings by integrating structured planning, progress visualization, and motivational prompts, making it an effective digital productivity companion.

CHAPTER 3 METHODOLGY

Life Canvas follows a front-end centered development methodology:

- **UI/UX Design**: Wireframing dashboard layout, task cards, goal sections, and quote boxes.
- **Frontend Development**:
  - HTML5 for all components
  - CSS3 for responsive, minimalistic design
  - JavaScript for task management, goal tracking, and dynamic quotes
- **Data Persistence**: Local Storage used to save tasks, goals, and favourite quotes.
- **Testing**:
  - Interface responsiveness
  - Quote generation logic
  - Task and goal updates
- **Deployment**: Implemented using GitHub Pages for accessibility.

This methodology ensures a lightweight, interactive productivity dashboard with real-time updates and personalized motivation.

```
<!DOCTYPE html>
<html>
<head>
<title>Life Canvas - Basic</title>
<style>
  body { background:#111; color:white; font-family:Arial; padding:20px; }
  .box { background:#222; padding:15px; border-radius:10px; margin-bottom:20px; }
  input { width:70%; padding:8px; border-radius:6px; border:none; margin-right:6px; }
  button { padding:8px 12px; border:none; border-radius:6px; background:#00eaff; }
  .item { background:#333; padding:10px; margin-top:8px; border-radius:6px; }
</style>
</head>
<body>

<h1>Life Canvas (Basic)</h1>

<div class="box">
  <h2>Tasks</h2>
  <input id="task" placeholder="Add task">
  <button onclick="addTask()">Add</button>
  <div id="taskBox"></div>
</div>

<div class="box">
  <h2>Goals</h2>
```

```
  <input id="goal" placeholder="Add goal">
  <button onclick="addGoal()">Add</button>
  <div id="goalBox"></div>
</div>

<div class="box">
  <h2>Daily Quote</h2>
  <p id="quote"></p>
  <button onclick="newQuote()">New Quote</button>
</div>

<script>
let t = [], g = [];
let quotes = [
  "Do it now.",
  "Stay consistent.",
  "Small progress matters.",
  "Your effort counts."
];

function addTask(){
  if(task.value.trim()){
    t.push(task.value);
    task.value="";
    render();
```

```
  }
}
function addGoal(){
  if(goal.value.trim()){
    g.push(goal.value);
    goal.value="";
    render();
  }
}

function newQuote(){
  quote.innerText = quotes[Math.floor(Math.random()*quotes.length)];
}

function render(){
  taskBox.innerHTML = t.map(x=>`<div class='item'>${x}</div>`).join("");
  goalBox.innerHTML = g.map(x=>`<div class='item'>${x}</div>`).join("");
  newQuote();
}

render();
</script>
</body>
</html>
```

Output:

CHAPTER 4

RESULTS AND DISCUSSIONS

Testing demonstrated that Life Canvas effectively supports users in task organization, goal monitoring, and daily motivation. The Task Manager allowed seamless creation, editing, and deletion of tasks, with clear visual indicators for priorities and completion.

The Goal Tracker displayed milestones and progress percentages accurately, helping users stay aligned with their objectives. The dynamic quote generator successfully refreshed motivational content, creating a positive user experience.

Responsiveness tests confirmed compatibility across devices, and user feedback highlighted the intuitive UI, clean design, and engaging layout. LocalStorage ensured data persistence without the need for backend systems.

Overall, Life Canvas achieved its objectives of providing a simplified yet powerful productivity dashboard that boosts organization, discipline, and motivation.

CHAPTER 5

CONCLUSION AND FUTURE SCOPE

5.1 Conclusion

Life Canvas demonstrates how front-end technologies can be applied to create an integrated personal productivity dashboard. By combining a Task Manager, Goal Tracker, and Motivational Quote Engine, the platform encourages consistent productivity and emotional well-being. Its responsive interface, dynamic UI elements, and persistent storage make it a practical and engaging digital tool for everyday use.

5.2 Future Scope

Life Canvas can be enhanced through:

- Cloud-based storage for multi-device syncing
- AI-generated personalized quotes
- Habit trackers and streak features
- Push notifications for urgent reminders
- Calendar integration
- Collaboration mode for shared tasks or goals

With these advancements, Life Canvas could evolve into a complete personal productivity ecosystem supporting diverse lifestyles and long-term personal development.