 **TEXT BASED ADVENTURE GAME** 

**A PROJECT REPORT**

***Submitted by***

**SANTHOSH S (2302811724321097)**

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

**CGB1201 – JAVA PROGRAMMING**

***in***

**ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY**

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

**SAMAYAPURAM – 621 112**

**DECEMBER, 2024**

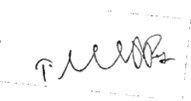
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**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)**

**SAMAYAPURAM – 621 112**

# BONAFIDE CERTIFICATE

Certified that this project report on **“TEXT BASED ADVENTURE GAME ”** is the bonafide work of **SANTHOSH S(2302811724321097)** who carried out the project work during the academic year 2024 - 2025 under my supervision.



/

|  |  |
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Submitted for the viva-voce examination held on 3.12.24



**INTERNAL EXAMINER EXTERNAL EXAMINER**

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# DECLARATION

I declare that the project report on “ **TEXT BASED ADVENTURE GAME**” is the result of original work done by us and best of our knowledge, similar work has not been submitted to “**ANNA UNIVERSITY CHENNAI**” for the requirement of Degree of **BACHELOR OF TECHNOLOGY**. This project report is submitted on the partial fulfillment of the requirement of the award of the **CGB1201 – JAVA PROGRAMMING.**

A close-up of a wire

Description automatically generated

**Signature**

**SANTHOSH S**

**Place:** Samayapuram **Date:** 3/12/2024

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**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.

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I thank **Dr.T.AVUDAIAPPAN, M.E.,Ph.D**., Head of the Department of **ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**, for providing her encouragement in pursuing this project.

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## Mrs.S.GEETHA M.E., Department of

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## 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 centre 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 excel in education, innovation and research in Artificial Intelligence and Data Science to fulfill industrial demands and societal expectations.

Mission 1: To educate future engineers with solid fundamentals, continually improving teaching methods using modern tools.

Mission 2: To collaborate with industry and offer top-notch facilities in a conductive learning environment.

Mission 3: To foster skilled engineers and ethical innovation in AI and Data Science for global recognition and impactful research.

Mission 4: To tackle the societal challenge of producing capable professionals by instilling employability skills and human values.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

**PEO 1:** Compete on a global scale for a professional career in Artificial Intelligence and Data Science.

**PEO 2:** Provide industry-specific solutions for the society with effective communication and ethics.

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**PEO 3:** Hone their professional skills through research and lifelong learning initiatives.

## 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.

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1. **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:** Capable of working on data-related methodologies and providing industryfocussed solutions.
* **PSO2:** Capable of analysing and providing a solution to a given real-world problem by designing an effective program.

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# ABSTRACT

The text-based adventure game where the player makes choices to explore different environments. The player can choose to enter a cave or a forest, each with different risks and rewards.The player's health decreases if they die and their score increases with success. The game ends when the player decides to stop or when their health runs out.

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# CHAPTER 1 INTRODUCTION

## 1.1 INTRODUCTION

To develop a fitness tracker application that allows users to monitor their physical activities, set fitness goals, and track progress using an interactive and intuitive interface. The application aims to promote healthier lifestyles and provide real-time insights into users' fitness journeys.

## 1.2 OBJECTIVE

1.Create an engaging storyline with multiple branching paths.2.Implement an intuitive command-based input system.3.Incorporate inventory and item management.4.Provide player choices that affect the game’s outcome.5.Design challenging puzzles or obstacles for the player.6.Track player progress, inventory, and decisions.7.Define clear game over and victory conditions.

# CHAPTER 2 PROJECT METHODOLOGY

## 2.1PROPOSED WORK

The Text Based Adventure Game adopts a modular and scalable design to effectively monitor fitness activities and manage user data. The key components of the proposed work are as follows:

**Enhanced User Interface:**

Develop an intuitive GUI using Java Swing, ensuring smooth navigation for activity tracking, goal setting, and progress monitoring.

**Real-Time Activity Tracking:**

Utilize multithreading for seamless real-time updates of tracked data, including steps, calories, and workout duration, without performance delays.

**Personalized Goal Management:**

Provide features to set, edit, and track fitness goals.

Enable progress tracking with visual feedback through charts and graphs.

**User Profile Management:**

Maintain centralized user profiles that store details such as age, weight, and fitness preferences.

Ensure accurate data updates and personalized recommendations.

**Scalability for Future Enhancements:**

Plan for integration with external APIs for syncing data from wearable devices.

Enable cloud-based data storage and multi-user support for broader functionality.

**2.2 BLOCK DIAGRAM:** A diagram of a game

Description automatically generated

**CHAPTER 3**

# JAVA PROGRAMMING CONCEPTS

**3.1 OBJECT-ORIETED PROGRAM (OOP):**

The code uses classes, objects, and methods to organize and structure the game logic.**3.3 CONDITIONNAL STATEMENTS:**

The code uses if-else statements to handle different scenarios and make decisions based on user input.**3.3 LOOPS:**

The code uses loops (e.g., while loop) to repeat certain actions or scenarios.**3.4 RANNDOM NUMBER GENERATION:**

The code uses the Random class to generate random numbers for certain game events.

**CHAPTER 4**

# MODULE DESCRIPTION

**4.1 GAME LOOP MODULE:**

startGame() method, which contains the main game loop.**4.2 SCENE MODULE:**

exploreCave() and enterForest() methods, which represent different scenes in the game.**4.3 RANDOMIZATON MODULE:**

exploreRandom() method, which generates random numbers for certain game events.**4.4 USER INPUT MODULE:**

Scanner class, which handles user input.**4.5 GAME STATE MODULE:**

Variables like health and score, which store the game state.**4.6 UTILITY MODULE:**

pause() and clear() methods, which provide utility functions for the game.

## REFERENCES

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* Herbert Schildt, *"Java: The Complete Reference,"* McGraw-Hill.
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* Telusko (Java Tutorials): [YouTube](https://www.youtube.com/user/javaboynavin) [Link](https://www.youtube.com/user/javaboynavin)
* CodeWithHarry: [YouTube](https://www.youtube.com/c/CodeWithHarry) [Link](https://www.youtube.com/c/CodeWithHarry)

# ` CHAPTER 5 CONCLUSION

# In conclusion, the text-based adventure game successfully demonstrates basic programming concepts and provides an engaging interactive experience. It offers a simple yet effective way to learn about decision-making, random events, and user input. With room for expansion, the game can be improved by adding more features and complexity to enhance the player's experience.

# APPENDICES

**APPENDIX A – SOURCE CODE**

import java.util.Scanner;public class TextAdventureGame { public static void main(String[] args) { Scanner scanner = new Scanner(System.in); System.out.println("Welcome To The Text Adventure Game!"); System.out.println(); System.out.println("You Find Yourself In A Mysterious Place:"); System.out.println("1. Explore The Dark Cave"); System.out.println("2. Walk Through The Enchanted Forest"); System.out.print("Enter Your Choice: "); int choice1 = scanner.nextInt(); if (choice1 == 1) { System.out.println(); System.out.println("You Enter The Dark Cave And Discover A Treasure Chest!"); System.out.println("1. Open The Chest"); System.out.println("2. Leave The Cave"); System.out.print("Enter Your Choice: "); int choice2 = scanner.nextInt(); if (choice2 == 1) { System.out.println(); System.out.println("You Find Out Treasure!"); System.out.println("Your Score: 20"); System.out.println("You Are Now Good To Go Ahead"); } else { System.out.println();

System.out.println("You Leave The Cave Safely, But You Miss The Treasure!"); System.out.println("Your Score: 10"); System.out.println("Try Again To Find The Treasure."); } } else if (choice1 == 2) { System.out.println(); System.out.println("You Walk Through The Enchanted Forest And Find A Hidden Path!"); System.out.println("You Gain Wisdom But No Treasure!"); System.out.println("Your Score: 15"); System.out.println("You Are Now Good To Go Ahead");} else { System.out.println(); System.out.println("Invalid Choice! Game Over."); } scanner.close(); } }

# APPENDIX B– SCREEN SHOT

