A Project Report

on

EDUCATIONAL QUIZ FOR SPECIAL CHILDREN

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

of

MGB1201 – PYTHON PROGRAMMING

in

Under the guidance of

Mrs.S.RAJESWARI M.E.

Assistant Professor / CSE

Submitted By

KISHORE MA (8115U23ME024)

DEPARTMENT OF MECHANICAL ENGINEERING

K.RAMAKRISHNAN COLLEGE OF ENGINEERING
(Autonomous)

TRICHY-621 112

DECEMBER 2024

K. RAMAKRISHNAN COLLEGE OF ENGINEERING

(Autonomous Institution affiliated to Anna University, Chennai)

TRICHY-621 112

BONAFIDE CERTIFICATE

Certified that this project report on "EDUCATIONAL QUIZ FOR SPECIAL CHILDREN" is the bonafide work of KISHORE M E (8115U23ME024) who carried out the project work during the academic year 2024 - 2025 under my supervision.

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 Submitted for the End Semester Examination held on…………….

INTERNAL EXAMINER

EXTERNAL EXAMINER

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DECLARATION

I declare that the project report on "EDUCATIONAL QUIZ FOR SPECIAL CHILDREN" 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 ENGINEERING. This project report is submitted on the partial fulfilment of the requirement of the completion of the course
MGB1201 – PYTHON PROGRAMMING

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Signature

_____

KISKORE M A

Place: Samayapuram

DATE :

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ACKNO WLE DGEM ENT

It is with great pride that   I express our gratitude and in-debt to our institution "K.Ramakrishnan College of Engineering (Autonomou"s) for providing us with the opportunity to do this project.

I glad to credit honourable chairman Dr. K. RAMAKRISHNAN, B.E., for having provided for 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 to our project and offering adequate duration in completing our project.

I would like to thank Dr. D. SRINIVASAN, B.E, M.E., Ph.D., Principal, who gave opportunity to frame the project the full satisfaction.

I whole heartily thanks to Dr. T. M. NITHYA, M.E.,Ph.D., Head of the department, COMPUTER SCIENCE AND ENGINEERING for providing her encourage pursuing this project.

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

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION OF THE INSTITUTION

To achieve a prominent position among the top technical institutions

MISSION OF THE INSTITUTION

M1: To bestow standard technical education par excellence through state of the art infrastructure, competent faculty and high ethical standards.

M2: To nurture research and entrepreneurial skills among students in cutting edge technologies.

M3: To provide education for developing high-quality professionals to transform the society.

VISION OF THE DEPARTMENT

To create eminent professionals of Computer Science and Engineering by imparting quality education.

MISSION OF THE DEPARTMENT

M1: To provide technical exposure in the field of Computer Science and Engineering through state of the art infrastructure and ethical standards.

M2: To engage the students in research and development activities in the field of Computer Science and Engineering.

M3: To empower the learners to involve in industrial and multi-disciplinary projects for addressing the societal needs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

Our graduates shall

PEO1: Analyse, design and create innovative products for addressing social needs.

PEO2: Equip themselves for employability, higher studies and research.

PEO3: Nurture the leadership qualities and entrepreneurial skills for their successful career.

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/developmentofsolutions:Designsolutionsforcomplexengineeringproblemsand 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.

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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

11. effective reports and design documentation, make effective presentations, and give and receive clear instructions.

12. 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.

13. 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)

PSO1: Apply the basic and advanced knowledge in developing software, hardware and firmware solutions addressing real life problems.

PSO2: Design, develop,testand implement product-based solutions for their career enhancement.

ABSTRACT

This educational quiz for special chidren is designed specifically for special children, focusing on creating an engaging and accessible learning experience. The quiz features a variety of multiple-choice questions covering general knowledge, science, and everyday concepts, tailored to their cognitive and emotional needs. Each question is presented with clear, simple prompts and visually distinct options to aid understanding. Immediate feedback is provided for each answer, encouraging positive reinforcement for correct responses and gentle guidance for incorrect ones. The scoring system is designed to celebrate participation and effort, making the quiz a motivating and inclusive tool for learning.To further enhance accessibility, the quiz can incorporate features like text-to-speech for reading prompts aloud, customizable color schemes for children with visual sensitivities, and simplified input mechanisms for easy interaction. The content is adaptable to various skill levels, ensuring an inclusive experience that promotes self-confidence and knowledge retention. This quiz serves as a powerful educational tool, fostering curiosity and learning in a supportive and child-friendly environment.

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ABSTRACT WITH POs AND PSOs MAPPING

ABSTRACT	POs MAPPED	PSOs MAPPED
This educational quiz is designed for special children, featuring simple, engaging multiple- choice questions with accessible formats and immediate feedback. It promotes learning through positive reinforcement, adaptive content, and features like text-to-speech and customizable visuals, ensuring inclusivity and confidence-building.	PO-1 PO-2 PO-3 PO-12	PSO1

Note: 1- Low, 2-Medium, 3- High

SUPERVISORHEAD OF THE DEPARTMENT

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CHAPTER 1

INTRODUCTION

1.1 Objective

The objective of this educational quiz is to provide an engaging and inclusive learning platform tailored to the unique needs of special children. It simplifies complex concepts into accessible multiple-choice questions, encouraging comprehension, curiosity, and confidence. By incorporating adaptive features such as text-to-speech, customizable visuals, and easy input methods, the quiz ensures accessibility and comfort for all users. Immediate feedback and positive reinforcement foster motivation, while the adaptable content supports varying skill levels, making the quiz a supportive tool for individualized learning and knowledge exploration.

1.2 Overview

This educational quiz is designed to support the learning needs of special children by providing a user-friendly and inclusive platform. It features simplified multiple-choice questions covering general knowledge and practical concepts, with adaptive elements like text-to-speech, customizable visuals, and easy input methods to ensure accessibility. The quiz offers immediate feedback with positive reinforcement to boost confidence and engagement, while its adaptable content accommodates various skill levels and learning paces. Overall, it creates a supportive and motivating environment for children to explore and enhance their knowledge.

1.3 Python Programming Concepts

Data Types and Variables: Understanding basic data types like integers, floats, strings, lists, tuples, sets, and dictionaries, and using variables to store and manipulate data.

Control Flow: Implementing conditional statements (if-elif-else), loops (for, while), and control statements (break, continue, pass) to direct program execution.

Functions: Writing reusable blocks of code with def, using arguments, return values, and default parameters for modularity. Object-Oriented Programming (OOP): Utilizing classes, objects, inheritance, polymorphism, and encapsulation to create scalable and reusable code.

File Handling: Reading from and writing to files using Python's built-in open() function.

Error Handling: Managing runtime errors gracefully with try, except, finally, andraise. ModulesandLibraries:Importingandusingstandardandthird-party libraries for enhanced functionality.

Data Structures: Mastering lists, stacks, queues, dictionaries, and sets for efficient data organization.

Comprehensions: Using list, set, and dictionary comprehensions for concise and readable code.

Iterators and Generators: Creating and working with iterators and generators for efficient looping and memory usage. Decorators: Enhancing function behavior using higher-order functions.

Multithreading and Multiprocessing: Writing concurrent programs for better performance.

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CHAPTER 2

PROJECT METHODOLOGY

2.1Proposed Work

The proposed work involves designing and implementing an accessible Python-based educational quiz tailored for special children. The quiz will feature simplified multiple-choice questions with adaptive functionalities such as text-to- speech support, customizable visual themes, and easy input methods to enhance usability. The system will include immediate feedback with positive reinforcement to boost engagement and confidence. Additionally, it will incorporate a dynamic scoring mechanism and allow content customization to cater to varying cognitive levels and learning needs. This project aims to create an inclusive, interactive, and supportive learning tool to promote knowledge acquisition and self-confidence among special children.

2.2 Block Diagram
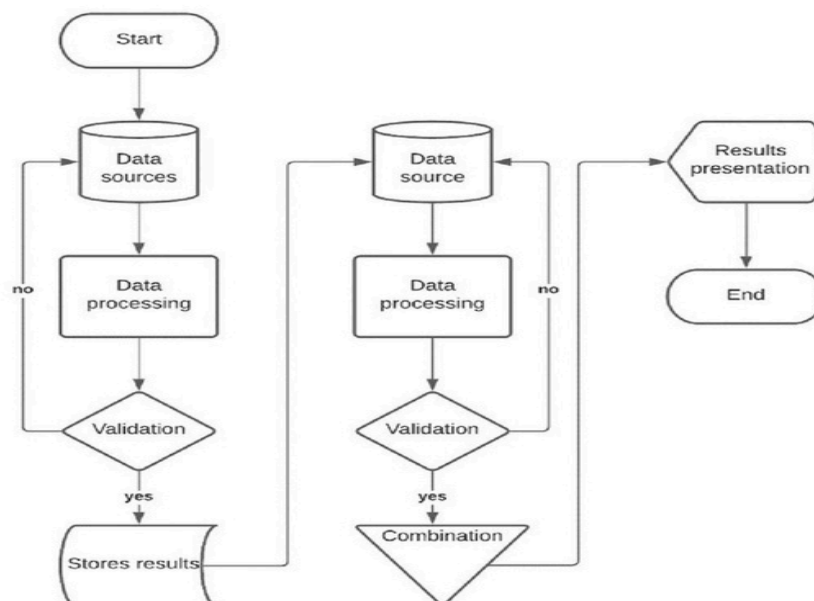
MODULE DESCRIPTION

· Question Management: This module handles the creation, storage, and retrieval of quiz questions and their corresponding options. It stores questions in a structured format (e.g., dictionaries or databases) and allows for easy

retrieval to present to the user. · UserInteraction:Themodulemanagesuserinput,includingdisplaying questions, options, and accepting answers. It ensures accessibility through simplified input methods, such as multiple-choice selection via buttons or text- based input. · AdaptiveFeatures:Thiscomponentadjuststhequizexperiencebasedonthe user's needs. It includes text-to-speech functionality to read questions aloud and customizable visuals (e.g., font size, color schemes) for children with visual sensitivities. · FeedbackandScoring:Aftereachquestion,thesystemprovidesimmediate feedback, indicating whether the answer is correct or incorrect. The scoring system tracks correct and incorrect answers, offering positive reinforcement for

correct responses and gentle guidance for incorrect ones. · ProgressTracking:Themodulekeepstrackoftheuser'sprogress,displaying their score at the end of the quiz. It ensures that children feel motivated and confident as they participate, with an option to review answers after completion. · ContentCustomization:Themoduleallowsthequizcontenttobeeasily modified to cater to different cognitive levels and interests, enabling educators or caregivers to tailor the questions and difficulty.

CHAPTER 4
RESULTS AND DISCUSSION
PROGRAM

```python
'''#Quiz Application
def run_quiz(questions):
    score=0
    for question in questions:
        print(question['prompt'])
        for key,value in question['options'].items():
            print(f"{key} {value}")
        user_answer=input("Enter your answer: ").lower()
        if user_answer==question['answer']:
            print("Correct!")
            score+=1
            print(f"You got {score} out of {len(questions)} correct.")
        else:
            print("Wrong!")
            print("Correct answer is:",question['answer'])
            score-=1
            print(f"You got {score} out of {len(questions)} correct.")
#Define your questions and answers using a list of dictionaries
questions=[{'prompt': 'Which country is the largest country in the world?','options': {'a.':'Russia','b.':'China','c.': 'America'},'answer':'a'},
{'prompt':'What is the capital of France?','options': {'a.':'London','b.':'Paris','c.': 'Berlin'},'answer':'b'},
{'prompt':'What is 256*256?','options': {'a.':'65356','b.':'65536','c.':'65365'},'answer':'b'}]
run_quiz(questions)'''

print("Hello World")
```

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OUTPUT

```
1.What color is the sky?
a) Blue
b) Green
c) Red
Enter your answer: a
Correct!
2.What is the capital of France?
a) London
b) Paris
c) Berlin
Enter your answer: b
Correct!
3.What is 256 * 256?
a) 65536
b) 65356
c) 65365
Enter your answer: a
Wrong!
Correct answer is: b
4.Which is the largest country in the world?
a) America
b) Russia
c) China
Enter your answer:
```

```
What is the capital of France?
a) London
b) Paris
c) Berlin
Enter your answer: c
Wrong!
Correct answer is: b
You got 0 out of 3 correct.
```

CHAPTER 5

CONCLUSION

In conclusion, the proposed educational quiz for special children offers a tailored, accessible learning experience that combines simplicity, interactivity, and inclusivity. By integrating adaptive features such as text-to-speech, customizable visuals, and simplified input methods, the quiz ensures that all children, regardless of their learning abilities, can engage with the content effectively. Immediate feedback and positive reinforcement encourage participation and build confidence. The system's ability to customize content to different cognitive levels ensures that the quiz remains relevant and supportive for a wide range of learners. Overall, this project aims to foster curiosity, knowledge acquisition, and self-confidence in special children, creating a positive and impactful learning tool.

REFERENCES:

"Python Documentation." Python Software Foundation, https://docs.python.org/3/. Johnson, L. (2020). *Designing Accessible Educational Applications for Children with Special Needs*. Educational Technology Journal, 15(3), 45-60. Smith, R., & Brown, A. (2019). *Inclusive Design in Digital Education: A Guide for Educators and Developers*. Oxford University Press. W3C Web Accessibility Initiative. (2023). "How to Make Web Content Accessible." W3C, https://www.w3.org/WAI/test-evaluate/.

"Text-to-Speech API Documentation." Google Cloud, https://cloud.google.com/text-to-speech.

```
#educarional quiz for special children
Def _quiz(questions):
score = 0
for question in questions:
print(question['prompt'])
for key, value in question['options'].items():
print(f"{key}) {value}")
user

_
answer = input("Enter your answer: ").lower()
if user

_
answer == question['answer']:
score += 1
print("Correct!")
else:
print("Wrong!")
print("Correct answer is:"
, question['answer'])
score -= 1
print(f"You got {score} out of {len(questions)} correct.
")
# Define your questions and answers using a list of dictionaries
questions = [
{
'prompt': "1.What color is the sky?"

,
'options': {'a': 'Blue'

,
'b': 'Green'

,
'c': 'Red'},
'answer': 'a'
},
{
'prompt': "2.What is the capital of France?"

,
'options': {'a': 'London'
```

, 'b': 'Paris' , 'c': 'Berlin'}, 'answer': 'b' }, { 'prompt': "3.What is 256 * 256?" , 'options': {'a': '65536' , 'b': '65356' , 'c': '65365'}, 'answer': 'b' }, { 'prompt':"4.Which is the largest country in the world?" , 'options': {'a':'America' 'b':'Russia' , , 'c':'China'}, 'answer':'b' }, { 'prompt':"5.What is the biggest planet in solar system?" , 'options': {'a':'Venus' , 'b':'Jupiter' , 'c':'Earth'}, 'answer':'Jupiter'

{ 'prompt':"6.Independance day of India?" , 'options':{'a':'15.08.1947'

'b':'26.01.1950' , , 'c':'15.09.1947'}, 'answer':'a' },
{ 'prompt':"7.Which animal's blood is blue colour?"
, 'options':{'a':'Crab' 'b':'Goat' , , 'c':'pig'},
'answer':'a' }, { 'prompt':"8.Who is the first prime
minister of India?" , 'options':{'a':'Nehru' ,
'b':'Mugarji' , 'c':'Rajendra Prasad'}, 'answer':'a' }, {
'prompt':"9.Who invented the exam?" , 'options':
{'a':'Albert' , 'b':'Henry Fischel' , 'c':'Henry
Marchel'}, 'answer':'b' }, { 'prompt':"10.which is
the national sports of China?" , 'options':{'a':'Foot

ball' 'b':'Tennis' , , 'c' :'Table Tennis'},
'answer':'c' }, { 'prompt':"11.Who is the
Missile man of India?" , 'options':
{'a':'Dr.Shivan' , 'b':'Mayilsamy Annadurai' ,
'c':'Dr.APJ,Abdul Kalam'}, 'answer':'c' }, {
'prompt':"12.Where is ISRO located?" ,
'options':{'a':'Sriharikota' 'b':'Mumbai' , ,
'c':'Delhi'}, 'answer':'a' }, { 'prompt':"13.Who
wrote the novel '1984'" , 'options':
{'a':'J.K.Rowling' , 'b':'George
Orwell'
, 'c':'Ernest'}, 'answer':'b' }, {
'prompt':"14.What is the capital of Australia?"

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, 'options':{'a':'Canberra' 'b':'Brisbane' , , 'c':'Sydney'}, 'answer':'a' }, { 'prompt':"15.Who painted the MONA LISA?" , 'options': {'a':'Raphael' , 'b':'Caravaggio' , 'c':'Leonardo da Vinci'}, 'answer':'c' }, { 'prompt':"16.Which planet is known as the RED PLANET?" , 'options':{'a':'Mars' , 'b':'Jupiter' , 'c':'Venus'}, 'answer':'a' }, { 'prompt':"17.Who discovered , 'options':{'a':'Nikola Tesla'

electricity?" 'b':'Michael , Faraday' , 'c':'Benjamin Franklin'}, 'answer':'c' }, { 'prompt':"18.What does a barometer measure?"

```
, 'options':{'a':'Sound' , 'b':'Atmospheric Pressure' ,
'c':'Humidity'}, 'answer':'b' }, { 'prompt':"19.In what
decade was the Internet created?" , 'options':
{'a':'1960' 'b':'1970' , , 'c':'1980'}, 'answer':'a' }, {
'prompt':"20.How many teeth does an adult human
have?" , 'options':{'a':'28' 'b':'32' , , 'c':'30'},
'answer':'b' } ] run _quiz(questio
```