

Transforming Education Transforming India

Minor Project Report

on

Project Title: -

Quiz-Time: A Subject-Based Quiz Game

Course: PROGRAMMIG METHODOLOGIES-LABORATORY

Course Code: CAP173

Submitted by

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Submitted to

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1. Title of the Project:

Quiz-Time: A Subject-Based Quiz Game

2. Problem Statement:

This project implements a subject-based quiz game in C. It allows users to choose a subject, answer five multiple-choice questions, and calculates their score. The program performs the following operations:

- a. Displays subject choices and takes user input.
- b. Stores and retrieves subject-specific questions and answers.
- c. Matches user responses with correct answers.
- d. Computes and displays the final score.

3. Objectives of the Proposed Project:

- a. Develop an interactive quiz platform in C language.
- b. Allow users to select subjects and test their knowledge.
- c. Provide instant results based on user responses.
- d. Reinforce basic programming concepts like arrays, functions, and control statements.

4. System Requirements:

- a. **Front-End**: Command-line interface for user interaction.
- b. Back-End: C programming language.

4.1 Flowchart/Algorithm:

- Prompt user to enter their name and choose a subject.
- Use a switch-case to load the corresponding quiz function.
- Display five questions; take and store user responses.
- Compare user responses with correct answers using a loop.
- Compute and display the final score.

4.2 Input:

- User's name.
- Subject choice (1 for Biology, 2 for Mathematics, 3 for Computer).

Responses to quiz questions (1-4 for each question).

4.3 Output:

• Final score out of 5.

5. Constraints:

- a. The program supports only three subjects: Biology, Mathematics, and Computer.
- b. Each quiz contains exactly five questions.
- c. Fixed correct answers for each subject are pre-defined in arrays.
- d. User responses must be integers between 1 and 4.

6. Benefits of the Proposed Project:

- a. Interactive platform for testing subject knowledge.
- b. Simple implementation suitable for beginners learning C.
- Helps reinforce programming fundamentals like arrays, loops, and functions.
- d. Educational and entertaining for users.

7. Expected Outcomes:

- a. A functional quiz program that accepts user input and computes scores.
- b. Accurate evaluation of user responses.
- c. Improved user engagement through an interactive interface.

8. Future Scope:

- a. Add more subjects and questions.
- b. Implement a graphical user interface for better interaction.
- c. Store scores in a file for tracking progress.
- d. Introduce a timer for added difficulty.
- e. Support multiple users and maintain leaderboards.

9. Coding Screenshots:

```
≡ File Edit Search Run
                            Compile Debug Project Options
                                                                Window Help
-[•]-
                              = PROJECT\QUIZ.C =
/*A quiz game in C language developed by Mona Raj for
Minor Project in CAP173 at LPU*/
/*Logic of program
    1.allow user to select a subject using switch case
    2.store questions for each subject in separate functions
    3.store correct answers in an array
   4.match user's answers with the correct using if else ladder
   5.calculate result
   6.display result
//header files
#include<stdio.h>
#include<conio.h>
//function declaration
void bio();
void math();
void comp();
   —— 1:1 ——(T
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
Compile Debug Project Options
                                                                  Window Help
    File Edit Search Run
 =[ • ]=
                                PROJECT\QUIZ.C
//global variables declaration
char name[10];
int i;
int ans[5]={6,6,6,6,6};
int userInput[5]={0,0,0,0,0,0};
//main function
void main()
    int sub;
    int score=0;
    clrscr();
    printf("QUIZ-TIME!!!\nEnter your name : ");
    scanf ("z
             ",name);
    printf (
            \n");
    printf C
    scanf ("xd", &sub);
    printf C
     = 41:36 ----
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
File Edit Search Run Compile Debug Project Options
                                                               Window Help
                              PROJECT\QUIZ.C
    //selecting subject using switch case
    switch(sub)
        case 1:
        bio(); //function call
        break:
        case 2:
        math(): //function call
        break:
        case 3:
        comp(): //function call
        break;
        default:
        printf("Invalid input, tru again\n"); //default case
        break:
    //calculating score
    for(i=0;i<5;i++)
        if (userInput[i] == ans[i])
     — 63:43 ——(I
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
■ File Edit Search Run Compile Debug Project Options

                                                                 Window Help
                               PROJECT\QUIZ.C =
    for(i=0;i<5;i++)
        if (userInput[i] == ans[i])
            score=score+1;
        }
    }
    //displaying score
    printf ("\
    printf("Thank you for playing %s. Nothere are your results : \nScore : 24 /5"
    getch();
                                                                     П
//defining bio() function
void bio()
    const char *bioQues[5]={"A. What is the nowerhouse of the cell?\n1. Hucle
    int bioAns[5]={3,4,2,1,3};
    — 81:43 —<del>—</del>—
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
File Edit Search Run Compile Debug Project Options
                                                                  Window Help
 =[||]=
                               = PROJECT\QUIZ.C =
    printf ("xx, Are
                         ready to become a BIOLOGY WIZARD?\n", name);
    for(i=0;i<5;i++)
        printf(bioQues[i]);
        scanf(""ad", &userInput[i]);
        ans[i]=bioAns[i];
 //defining math() function
void math()
    const char *mathQues[5]={'h, What is the online of 7+3*2\n1, 26\n2, 13\n3
    int mathAns[5]={2,3,2,3,3};
    printf("xx, Are you ready to become a MATHS WIZARD"\n", name);
    for(i=0;i<5;i++)
        printf(mathQues[i]);
        scanf ("xd", &user Input[i]);
    = 102:43 ===<u></u>
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
File Edit Search Run Compile Debug Project Options
                                                                Window Help
-[•]-
                               PROJECT\QUIZ.C =
        printf(mathQues[i]);
        scanf ("kd", &user Input[i]);
        ans[i]=mathAns[i];
//defining math() function
void comp()
    const char *compQues[5]={"A. What is the shortcut key for 'Copy' in west
    int compAns[5]={2,2,3,3,4};
    printf ("xs. Are uon readu to become a COMPUTER WIZARD?\n", name);
    for(i=0;i<5;i++)
        printf(compQues[i]);
        scanf ("xd", &user Input[i]);
        ans[i]=compAns[i];
    = 121:43 ——
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

10. Results screenshots:

```
File Edit Search Run Compile Debug Project Options
PROJECT\QUIZ.C
                                                                   Window Help
 -[1]-
                                                                           -1=[‡]-
        scanf ("ad", &user Input[i]);
        ans[i]=mathAns[i];
    }
//defining math()
                                   Compiling
void comp()
{
                     Main file: PROJECT\QUIZ.C
    const char *co
                     Compiling: EDITOR → QUIZ.C
    int compAns[5]
                                                  File
                        Lines compiled: 576
                                                  576
    printf ("xs. A
                              Warnings: 0
                                                  0
                                                                ,name);
    for(i=0;i<5;i+
                                Errors: 0
                                                  0
        printf (com
                      Available memory: 1969K
        scanf ("xd"
                      Success
        ans[i]=com
     = 122:43 ----
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu
```

```
QUIZ-TIME!!!
Enter your name : Mona

Welcome Mona !
Choose a subject :
Enter 1 for Biology
Enter 2 for Mathematics
Enter 3 for Computer

1

Mona, Are you ready to become a BIOLOGY WIZARD?
A. What is the powerhouse of the cell?
1. Nucleus
2. Ribosome
3. Mitochondria
4. Golgi Apparatus
3_
```

```
C. Which organ is primarily responsible for filtering waste from the blood?
1. Liver
2. Kidney
3. Heart
4. Stomach
D. What is the term for the process by which plants make their own food using su
1. Photosynthesis
2. Respiration
3. Transpiration
4. Fermentation
E. Which macromolecule serves as the primary energy source for living cells?
1. Proteins
2. Lipids
3. Carbohydrates
4. Nucleic Acids
3
Thank you for playing Mona.
Here are your results :
Score : 4 /5_
```

Error Handling:

```
QUIZ-TIME!!!
Enter your name : mona

Welcome mona !
Choose a subject :
Enter 1 for Biology
Enter 2 for Mathematics
Enter 3 for Computer
9

Invalid input, try again

Thank you for playing mona.
Here are your results :
Score : 0 /5
```