PROJECT : QUIZZER

SOURCE CODE---

//PROGRAMMING PRACTICE

// QUIZZER GAME

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/\*PROJECT DESCRIPTION

THIS IS QUIZZER GAME WHERE USER CAN GIVE QUIZ AS PER AS ITS INTERESTED DOMAIN

THIS PROJECT IS DONE WITH BASIC C LANGUAGE AND WE APPLY BASIC CODING STANDARD

HEADER FILE SECTION\*/

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>

// Structure to represent a quiz question

typedef struct {

    char question[256];

    char options[4][64];

    int correct\_option;

} QuizQuestion;   // name of structure

// Function to display a quiz question

void displayQuestion(QuizQuestion question) {

    printf("%s\n", question.question);

    for (int i = 0; i < 4; i++) {

        printf("%c) %s\n", 'A' + i, question.options[i]);

    }

}

// getUserAnswer() Function to get and validate user's answer

char getUserAnswer() {

    char userAnswer;

    printf("Your answer (A, B, C, or D): ");

    while (1) {

        scanf(" %c", &userAnswer);

        if (userAnswer >= 'A' && userAnswer <= 'D' && userAnswer >= 'a' && userAnswer <= 'd') {

            return userAnswer;

        } else {

            printf("Invalid answer choice. Please enter A(a), B(b), C(c), or D(d) option  ");

        }

    }

}

// Function to run the quiz

int runQuiz(QuizQuestion questions[], int numQuestions) {

    int score = 0;

    printf("Welcome to the OUR Quiz Game!\n");

    printf("Press Enter to start.....");

    getchar();

    // Wait for user input

    for (int i = 0; i < numQuestions; i++) {

        system("clear"); // To Clear the screen after every question display

        printf("Question %d:\n", i + 1);

        displayQuestion(questions[i]);

        char userAnswer = getUserAnswer();

        if (userAnswer - 'A' == questions[i].correct\_option) {

            printf("Correct! You chose %c) %s.\n", userAnswer, questions[i].options[userAnswer - 'A']);

            score++;

        } else {

            printf("Incorrect. You chose %c) %s. The correct answer is %c) %s.\n",

                   userAnswer, questions[i].options[userAnswer - 'A'],

                   'A' + questions[i].correct\_option, questions[i].options[questions[i].correct\_option]);

        }

        printf("Your current score: %d\n", score);

        // Wait for user input before proceeding to the next question

        printf("\n\nPress Enter to continue...");

        getchar();

        system("clear");

    }

    return score;

}

int main() {

    srand(time(NULL));

// QUIZ QUESTION START FROM HERE

//1st Choice

QuizQuestion sportsQuiz[5] = {

       //question 1

        {"Which team won ODI Cricket world cup 2019?",

            {"India", "Pakistaan", "England", "Newzealand"},

            3

        },

        //question 2

        {"Which country host ODI World cup 2023?",

            {"India", "Australia", "Pakistan", "England"},

            0

        },

        //question 3

        {"Which player hold record of most Century 100 in international Cricket ?",

            {"Schin TEndulkar", "Virat Kohli", "ponting", "Babar Azam"},

            0

        },

        //question 4

        {"What is the most popular sport in the India?",

            {"Soccer", "Basketball", "Cricket", "Tennis"},

            2

        },

        //question 5

        {"Who won the 2021 T20 World cup?",

            {"India", "Australia", "Pakistaan", "England"},

            1

        },

    };

//2nd Choice

QuizQuestion programmingQuiz[10] = {

    //question 1

    {"What does HTML stand for?",

        {"Hypertext Markup Language", "Hyperlink and Text Markup Language", "High Technology Modern Language", "Hyper Text Modern Language"},

        0

    },

    //question 2

    {"Which programming language is known as the 'father of all programming languages'?",

        {"C", "Java", "Fortran", "Python"},

        2

    },

    //question 3

    {

        "In C, which operator is used to access the value stored at the address of a pointer?",

        {"\*", "&", "=>", "."},

        0

    },

    //question 4

    {

        "What does the 'printf' function do in C?",

        {"Prints formatted output", "Reads input from the user", "Clears the screen", "Performs mathematical calculations"},

        0

    },

    //question 5

    {

        "What is the maximum value for an 'int' data type in most C compilers?",

        {"32767", "65535", "2147483647", "4294967295"},

        2

    },

    //question 6

    {

        "What is the term for a variable that is local to a function and retains its value between function calls?",

        {"Local variable", "Static variable", "Global variable", "Constant variable"},

        1

    },

    //question 7

    {

        "What is the purpose of the 'break' statement in a 'switch' statement in C?",

        {"Terminate the loop", "Exit the function", "Skip the current iteration", "Exit the switch statement"},

        3

    },

    //question 8

    {

        "Wh0 is known as inventor of C language ?",

        {

            "Charles Babage", "Steave Job", "Mark jukerberg", "Dennis Ritchie"

        },

        0

    },

    //question 9

    {

        "In C, what is the purpose of 'malloc' function?",

        {"Allocate memory on the stack", "Allocate memory on the heap", "Free allocated memory", "Print a message to the console"},

        1

    },

    //question 10

    {

        "What is the correct syntax for a 'for' loop in C?",

        {"for (int i = 0; i < 10; i++)", "for i = 1 to 10", "for (int i = 0; i < 10)", "for (i = 0; i < 10)"},

        0

    }

};

//3rd Choice

QuizQuestion oopsConceptsQuiz[10] = {

    {"What is encapsulation in object-oriented programming?",

        {"Binding data that operate on the data into a single unit", "Inheritance from a base class", "Polymorphism", "Method overloading"},

        0

    },

    {"What is the base class for all classes in C++?",

        {"Object", "BaseClass", "MainClass", "None of the above"},

        3

    },

    {"What is the purpose of a constructor in C++?",

        {"To destruct an object", "To define a base class", "To create and initialize an object", "To declare a member variable"},

        2

    },

    {"What is a virtual function in C++?",

        {"A function that can be overridden in derived classes", "A function that cannot be overridden", "A static function", "A global function"},

        0

    },

    {"What is inheritance in object-oriented programming?",

        {"A mechanism to combine multiple classes into a single class", "A way to access private members of a class", "A way to hide data", "A way to define data types"},

        0

    },

    {"What is polymorphism in C++?",

        {"The ability of a function to operate on multiple data types", "A class that cannot be instantiated", "The ability to define multiple constructors", "A type of operator"},

        0

    },

    {"What is the 'new' operator used for in C++?",

        {"Creating a new class", "Allocating memory on the heap", "Declaring a new function", "Creating a new object"},

        1

    },

    {"What is an abstract class in C++?",

        {"A class that cannot be instantiated", "A class that has only one member function", "A class with no member variables", "A class with no constructors"},

        0

    },

    {"What is a destructor in C++?",

        {"A function that constructs an object", "A function that overloads operators", "A function that deallocates memory and cleans up an object", "A function that returns a value"},

        2

    },

    {"What is function overloading in C++?",

        {"Defining the same function multiple times with different names", "Calling a function from within another function", "Creating a new function", "Defining a function without a return type"},

        0

    }

};

//4th Choice

QuizQuestion generalKnowledgeQuiz[10] = {

    {"What is the capital of France?",

        {"Madrid", "Berlin", "Rome", "Paris"},

        3

    },

    {"Which planet is known as the 'Red Planet'?",

        {"Venus", "Mars", "Saturn", "Jupiter"},

        1

    },

    {"Who wrote 'Romeo and Juliet'?",

        {"William Shakespeare", "Charles Dickens", "Jane Austen", "Mark Twain"},

        0

    },

    {"What is the largest mammal in the world?",

        {"Elephant", "Giraffe", "Blue Whale", "Kangaroo"},

        2

    },

    {"Which gas do plants absorb from the atmosphere?",

        {"Oxygen", "Carbon Dioxide", "Nitrogen", "Hydrogen"},

        1

    },

    {"What is the largest ocean in the world?",

        {"Atlantic Ocean", "Indian Ocean", "Arctic Ocean", "Pacific Ocean"},

        3

    },

    {"Who was the first person to set foot on the Moon?",

        {"Neil Armstrong", "Buzz Aldrin", "Yuri Gagarin", "John Glenn"},

        0

    },

    {"What is the longest river in the world?",

        {"Nile", "Amazon", "Mississippi", "Yangtze"},

        0

    },

    {"Which country is known as the 'Land of the Rising Sun'?",

        {"China", "India", "Japan", "Thailand"},

        2

    },

    {"What is the chemical symbol for gold?",

        {"Au", "Ag", "Fe", "Hg"},

        0

    },

};

//5th Choice

QuizQuestion geographyQuiz[10] = {

    {"Which mountain range is the longest in the world?",

        {"The Alps", "The Andes", "The Himalayas", "The Rocky Mountains"},

        1

    },

    {"What is the largest desert in the world?",

        {"Sahara Desert", "Gobi Desert", "Arabian Desert", "Kalahari Desert"},

        0

    },

    {"Which river is the longest in the world?",

        {"Amazon River", "Mississippi River", "Nile River", "Yangtze River"},

        2

    },

    {"Which country is known as the 'Land of a Thousand Lakes'?",

        {"Sweden", "Canada", "Finland", "Norway"},

        2

    },

    {"Which ocean is the largest in terms of surface area?",

        {"Atlantic Ocean", "Indian Ocean", "Arctic Ocean", "Pacific Ocean"},

        3

    },

    {"Which country is both in Asia and Europe?",

        {"Russia", "Turkey", "Kazakhstan", "Greece"},

        1

    },

    {"What is the capital of Australia?",

        {"Sydney", "Canberra", "Melbourne", "Brisbane"},

        1

    },

    {"Which African country is known as the 'Rainbow Nation'?",

        {"Nigeria", "Kenya", "Egypt", "South Africa"},

        3

    },

    {"Which city is located at the confluence of the Danube and Sava rivers?",

        {"Budapest", "Vienna", "Belgrade", "Zagreb"},

        2

    },

    {"What is the northernmost capital city in the world?",

        {"Reykjavik", "Oslo", "Helsinki", "Copenhagen"},

        0

    },

};

//6th Choice

QuizQuestion politicsQuiz[10] = {

    {

        "Who is the President of the United States?",

        {"Joe Biden", "Donald Trump", "Barack Obama", "George W. Bush"},

        0

    },

    {

        "What is the political system of the United Kingdom?",

        {"Presidential Republic", "Parliamentary Democracy", "Absolute Monarchy", "Military Dictatorship"},

        1

    },

    {

        "Who is the current Prime Minister of India?",

        {"Narendra Modi", "Rahul Gandhi", "Manmohan Singh", "Amit Shah"},

        0

    },

    {

        "What is the indian currency?",

        {"Rupee", "Dollar", "Pound", "Yen"},

        0

    },

    {"Who is the current president of INDIa?",

        {"Pratibha patil", "Dropati murmu", "Jay Shah", "Yogi aditya nath"},

    },

    {

        "What is the largest political party in the INDIA?",

        {"Democratic Party", "BJP", "AAP", "CONGRESS(INC)"},

        1

    },

    {

        "What is the capital of Russia?",

        {"Saint Petersburg", "Kazan", "Novosibirsk", "Moscow"},

        3

    },

    {

        "Which country is known for its policy of 'neutrality' in international conflicts?",

        {"Sweden", "Switzerland", "Austria", "Norway"},

        1

    },

    {

        "What is the name of the United Nations' main deliberative and policymaking body?",

        {"Security Council", "General Assembly", "Secretariat", "International Court of Justice"},

        1

    },

    {"Who is the longest-serving leader in the history of INDIA ?",

        {"jawar lal Nehru", "Indira Gandhi", "Narendra Modi", "Rahul Gandhi"},

        0

    },

};

    int choice;

    int score;

        printf("...........WELCOME ...........\n\n");

        printf("Select your domain :\n");

        printf("1. Sports\n");

        printf("2. Programming\n");

        printf("3. OOPs Concepts\n");

        printf("4. General Knowledge\n");

        printf("5. Geography\n");

        printf("6. Politics\n");

        printf("7. Quit\n");

        printf("Enter your choice: ");

        scanf("%d", &choice);

        switch (choice) {

            case 1:

                score = runQuiz(sportsQuiz, 10);

                printf("\nYour score in the Sports Quiz: %d/5\n", score);

                break;

            case 2:

                score = runQuiz(programmingQuiz, 10);

                printf("\nYour score in the Programming Quiz: %d/10\n", score);

                break;

            case 3:

                score = runQuiz(oopsConceptsQuiz, 10);

                printf("\nYour score in the OOPs Concepts Quiz: %d/10\n", score);

                break;

            case 4:

                score = runQuiz(generalKnowledgeQuiz, 10);

                printf("\nYour score in the General Knowledge Quiz: %d/10\n", score);

                break;

            case 5:

                score = runQuiz(geographyQuiz, 10);

                printf("\nYour score in the Programming Quiz: %d/10\n", score);

                break;

            case 6:

                score = runQuiz(politicsQuiz, 10);

                printf("\nYour score in the OOPs Concepts Quiz: %d/10\n", score);

                break;

            case 7:

                printf("Thanks for playing!  have  a nice day.\n");

                exit()  ;

            default:

                printf("Invalid choice. Please select a valid option.\n");

        }

    return 0;

}

OUTPUT:



















