

MINI QUIZ GAME



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Features Required:

1. Display general knowledge questions
2. Provide four multiple-choice options for each question
3. Select questions randomly without repetition
4. Accept user answers and validate them
5. Calculate and display final score

Concepts to be Used: Arrays, Loops, Conditional Statements, Random Number Generation, Standard Input / Output Functions

Technology Used: C Programming Language

Output:

Console-based General Knowledge Quiz

Final score displayed after quiz completion

MINI QUIZ GAME

A C Programming Mini Project

1. Introduction

The **Mini Quiz Game** is a console-based application developed using the **C programming language**.

The main objective of this project is to test the user's knowledge in different subject areas such as **General Knowledge, Science, Computers, Mathematics, and Sports**.

The program is **menu-driven**, allowing the user to select a quiz category.

Each category contains a fixed set of multiple-choice questions.

The user selects answers, and the system evaluates them and calculates the final score.

This project demonstrates the use of **conditional statements, switch-case, and standard input/output functions** in C programming.

2. Objectives

- To develop a **menu-driven quiz application** using C
- To provide **multiple quiz categories**
- To implement **multiple-choice questions**
- To validate user answers
- To calculate and display the final score
- To improve logical thinking and programming skills

3. System Features

3.1 Question Display

The system displays one question at a time along with four multiple-choice options. Each question belongs to a selected category such as General Knowledge, Science, Computers, Mathematics, or Sports.

The user selects an option using characters **A, B, C, or D**.

3.2 Category Selection

The program displays a menu with five quiz categories.

The user selects a category by entering the corresponding number.

Based on the user's choice, the quiz questions of that category are displayed using a **switch-case statement**.

3.3 Answer Validation

The user's input is compared with the correct answer using **if-else conditions**.

If the answer is correct, the score is incremented by one.

If the answer is incorrect, the program displays the correct answer.

3.4 Score Calculation

After all questions in the selected category are answered, the system calculates the total score. The final score is displayed on the console in the format **score / 6**, since each category contains six questions.

4. Technology & Concepts Used

4.1 C Programming Concepts

- Switch-case – to select quiz categories
- If-else statements – to validate answers
- Variables – to store user input and score
- Standard I/O functions – printf() and scanf()

4.2 Program Control Technique

The program uses a menu-driven approach where the user's selection controls the execution flow.

Each quiz category is implemented as a separate case inside the switch statement.

5. System Design

5.1 Data Used

- int choice – stores selected quiz category
- int score – stores number of correct answers
- char ans – stores user answer

These variables help in controlling quiz flow and score calculation.

6. Workflow

Main Program Flow:

1. Display quiz menu
2. Accept user category choice
3. Display questions based on selected category
4. Accept user answers
5. Validate answers using conditions
6. Update score
7. Display final score

7. Sample Output (Console)

===== MINI QUIZ GAME =====

1. General Knowledge
2. Science
3. Computers

4. Mathematics

5. Sports

Enter your choice: 3

1. Father of computer?

A.Newton B.Babbage C.Tesla D.Edison

Your answer: B

Final Score: 5 / 6

Note:

The displayed score is an example.

The actual score depends on how many questions the user answers correctly

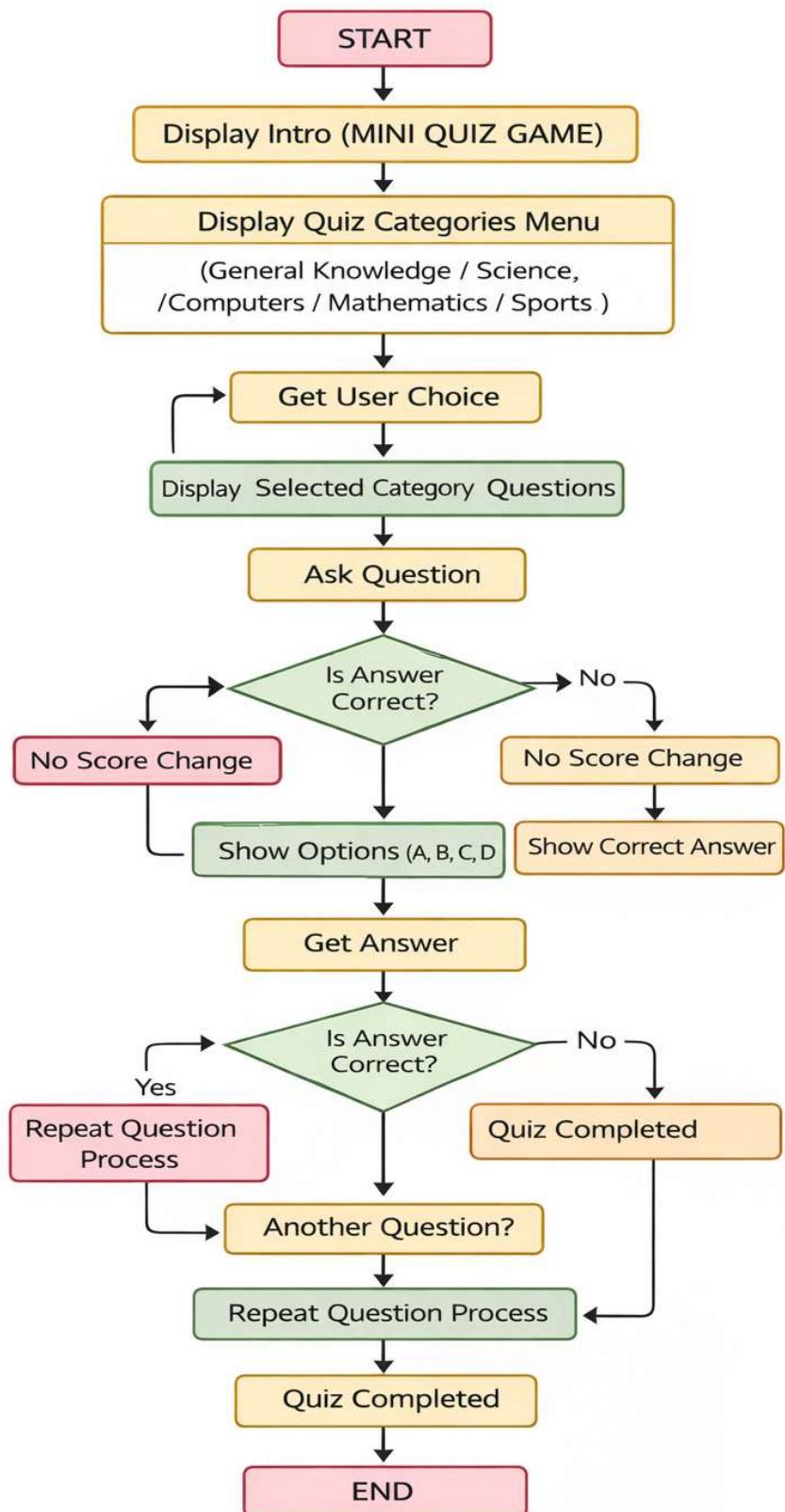
8. Conclusion

The **Mini Quiz Game** is a simple and effective console-based application developed using C programming.

It demonstrates the use of **menu-driven programming, conditional statements, and input/output operations**.

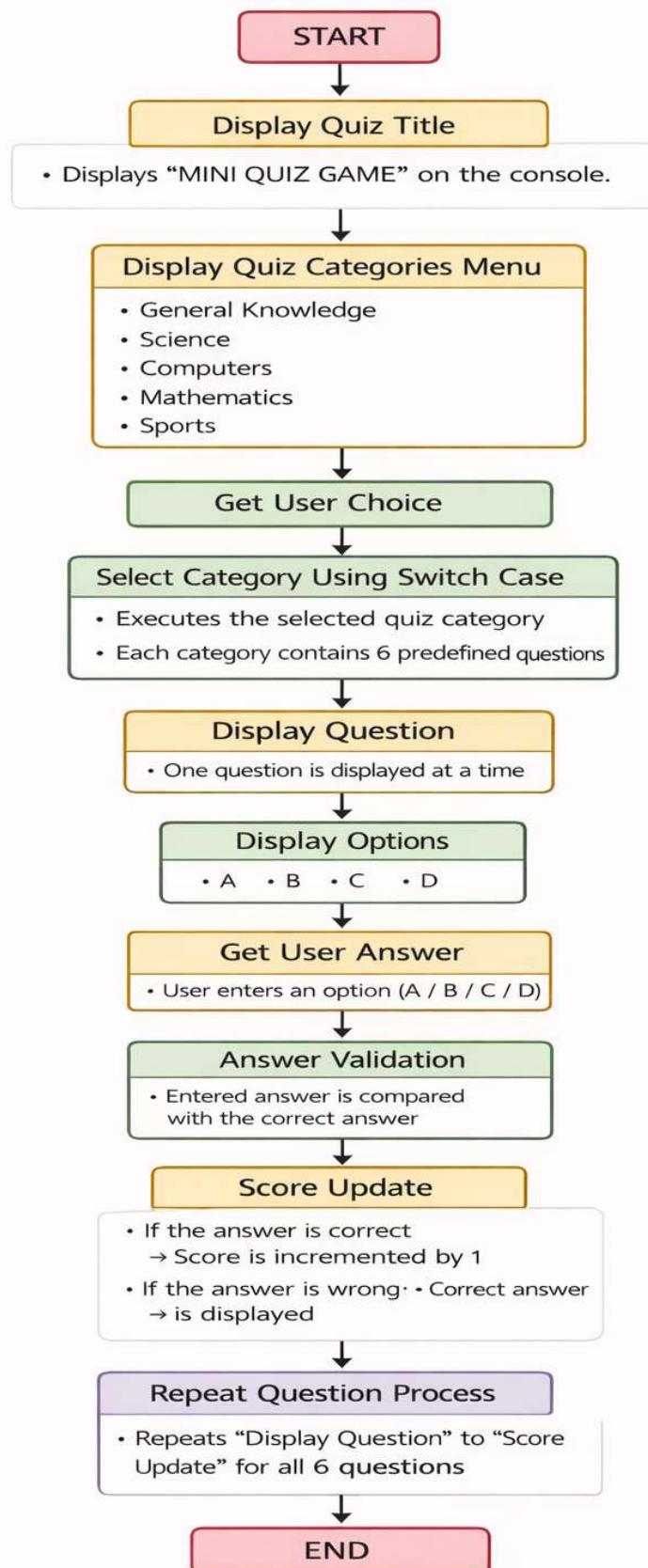
This project helps beginners understand program control flow and logical decision-making. It can be further enhanced by adding **arrays, loops, random question selection, timers, and file handling**.

QUIZ GAME WORKFLOW



PROCESS

QUIZ GAME PROCESS



SAMPLE CODE

```
#include <stdio.h>

int main() {
    int choice, score = 0;
    char ans;

    printf("\n==== MINI QUIZ GAME ====\n");
    printf("1. General Knowledge\n");
    printf("2. Science\n");
    printf("3. Computers\n");
    printf("4. Mathematics\n");
    printf("5. Sports\n");
    printf("Enter your choice: ");
    scanf("%d", &choice);

    switch(choice) {

        case 1:
            printf("\n1. Capital of India?\nA.Delhi B.Mumbai C.Kolkata D.Chennai\n");
            scanf(" %c",&ans);
            if(ans=='A' | ans=='a') score++; else printf("Wrong! Correct: A\n");

            printf("\n2. National Animal?\nA.Lion B.Tiger C.Deer D.Elephant\n");
            scanf(" %c",&ans);
            if(ans=='B' | ans=='b') score++; else printf("Wrong! Correct: B\n");

            printf("\n3. Largest ocean?\nA.Arctic B.Indian C.Pacific D.Atlantic\n");
            scanf(" %c",&ans);
    }
}
```

```
if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");

printf("\n4. National flower?\nA.Rose B.Lotus C.Lily D.Sunflower\n");
scanf(" %c",&ans);

if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");

printf("\n5. Father of Nation?\nA.Gandhi B.Nehru C.Patel D.Ambedkar\n");
scanf(" %c",&ans);

if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");

printf("\n6. Largest planet?\nA.Earth B.Mars C.Jupiter D.Saturn\n");
scanf(" %c",&ans);

if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");
break;

case 2:

printf("\n1. Formula of water?\nA.H2O B.CO2 C.O2 D.NaCl\n");
scanf(" %c",&ans);

if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");

printf("\n2. Heart chambers?\nA.2 B.3 C.4 D.5\n");
scanf(" %c",&ans);

if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");

printf("\n3. Gas for breathing?\nA.CO2 B.Oxygen C.Nitrogen D.Helium\n");
scanf(" %c",&ans);

if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");

printf("\n4. Sun is a?\nA.Planet B.Star C.Moon D.Comet\n");
scanf(" %c",&ans);
```

```
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");
```

```
printf("\n5. Boiling point of water?\nA.90 B.95 C.100 D.110\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");
```

```
printf("\n6. Vitamin from sunlight?\nA.A B.B C.C D.D\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='D' | |ans=='d') score++; else printf("Wrong! Correct: D\n");
```

```
break;
```

case 3:

```
printf("\n1. Father of computer?\nA.Newton B.Babbage C.Tesla D.Edison\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");
```

```
printf("\n2. C language developer?\nA.Dennis B.Guido C.James D.Linus\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");
```

```
printf("\n3. Brain of computer?\nA.Monitor B.CPU C.Mouse D.Keyboard\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");
```

```
printf("\n4. Binary digits?\nA.0,1 B.1,2 C.2,3 D.3,4\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");
```

```
printf("\n5. Output device?\nA.Keyboard B.Monitor C.Mouse D.Scanner\n");
```

```
scanf(" %c",&ans);
```

```
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");

printf("\n6. RAM means?\nA.Random Access Memory B.Read Memory C.Run Memory
D.None\n");
scanf(" %c",&ans);
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");
break;

case 4:
printf("\n1. 5 x 6 = ?\nA.30 B.25 C.20 D.15\n");
scanf(" %c",&ans);
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");

printf("\n2. Square of 8?\nA.16 B.32 C.64 D.48\n");
scanf(" %c",&ans);
if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");

printf("\n3. Even number?\nA.7 B.9 C.11 D.10\n");
scanf(" %c",&ans);
if(ans=='D' | |ans=='d') score++; else printf("Wrong! Correct: D\n");

printf("\n4. 100/10=?\nA.5 B.10 C.20 D.50\n");
scanf(" %c",&ans);
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");

printf("\n5. 12+8=?\nA.18 B.20 C.22 D.24\n");
scanf(" %c",&ans);
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");

printf("\n6. Prime number?\nA.4 B.6 C.9 D.7\n");
scanf(" %c",&ans);
```

```
if(ans=='D' | |ans=='d') score++; else printf("Wrong! Correct: D\n");
break;
```

case 5:

```
printf("\n1. National sport of India?\nA.Cricket B.Hockey C.Football D.Tennis\n");
scanf(" %c",&ans);
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");
```

```
printf("\n2. WC 2011 winner?\nA.India B.Aus C.Eng D.Pak\n");
scanf(" %c",&ans);
```

```
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");
```

```
printf("\n3. Olympic rings?\nA.4 B.5 C.6 D.7\n");
scanf(" %c",&ans);
if(ans=='B' | |ans=='b') score++; else printf("Wrong! Correct: B\n");
```

```
printf("\n4. Tennis Grand Slams?\nA.2 B.3 C.4 D.5\n");
scanf(" %c",&ans);
if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");
```

```
printf("\n5. Football legend?\nA.Dhoni B.Sachin C.Messi D.Kohli\n");
scanf(" %c",&ans);
if(ans=='C' | |ans=='c') score++; else printf("Wrong! Correct: C\n");
```

```
printf("\n6. Chess is played on?\nA.Board B.Field C.Court D.Track\n");
scanf(" %c",&ans);
if(ans=='A' | |ans=='a') score++; else printf("Wrong! Correct: A\n");
break;
```

default:

```
    printf("Invalid choice\n");

}

printf("\nFinal Score: %d / 6\n", score);

return 0;

}
```