Math quiz game

AOL ALGOPRO

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Project Overview

Math Quiz Game adalah program C sederhana untuk menguji kemampuan berhitung pengguna. Program memiliki menu, menghitung skor otomatis, menyimpan dan menampilkan skor yang telah diurutkan, serta menerapkan konsep dasar input-output, algoritma, sorting, dan file handling.

Project Overview

- *Menu Utama → navigasi program*
- *Play Quiz → menampilkan soal dan menghitung skor*
- *View Scores → membaca dan menampilkan data skor*
- *Sorting → mengurutkan skor dari tertinggi ke terendah*
- *File Handling → menyimpan dan membaca data skor*

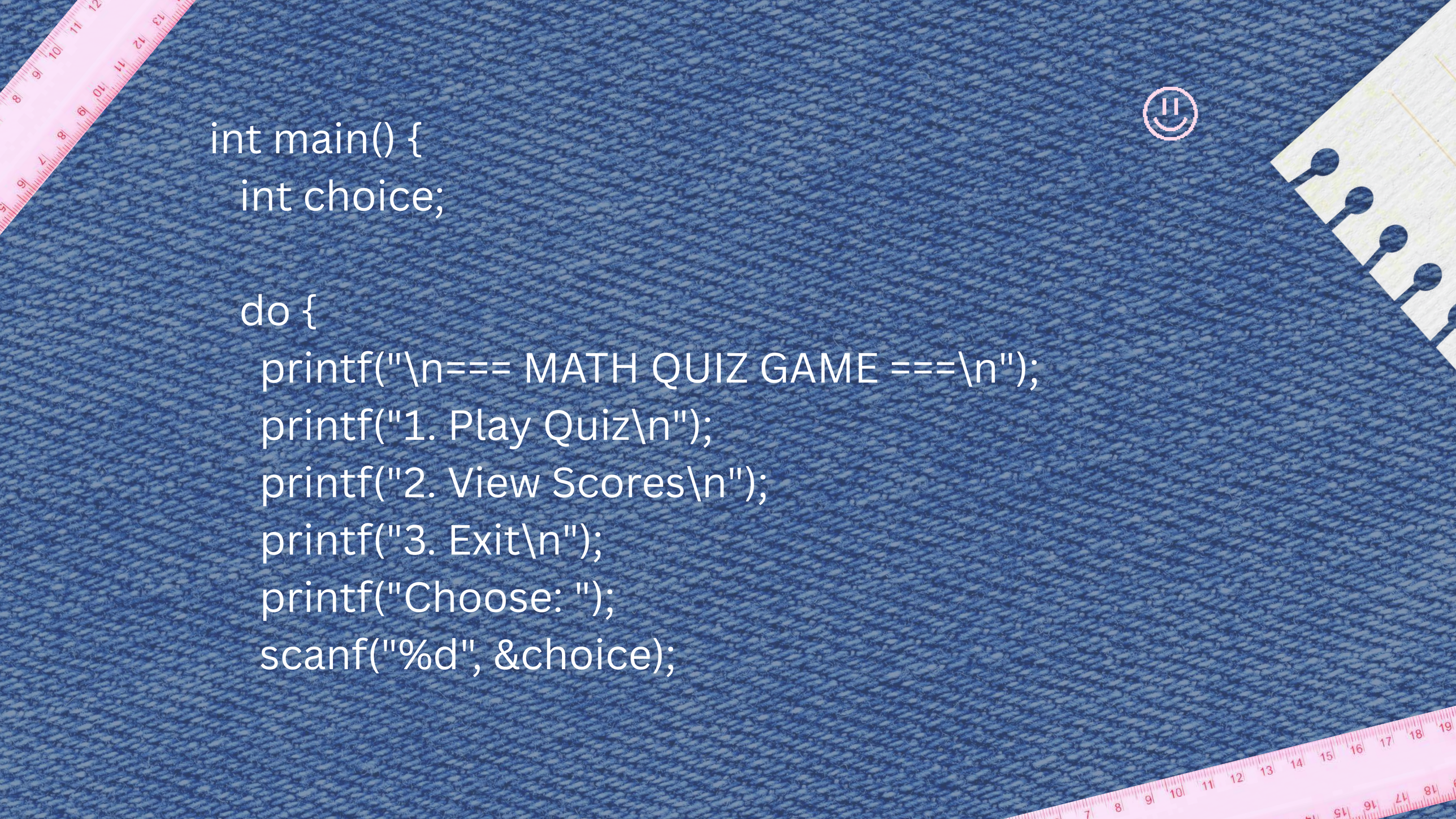
Project Overview

- struct Score → menyimpan nama dan skor pemain
- char name[] → menyimpan nama user
- int score → menyimpan nilai skor
- Array of struct → menyimpan banyak data skor

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>

/* structure to store score data */
struct Score {
   char name[30];
   int score;
};

/* function prototypes */
void playQuiz();
void saveScore(char name[], int score);
void readScore();
void sortScore(struct Score data[], int count);
```



```
int main() {
  int choice;

  do {
    printf("\n=== MATH QUIZ GAME ===\n");
    printf("1. Play Quiz\n");
    printf("2. View Scores\n");
    printf("3. Exit\n");
    printf("Choose: ");
    scanf("%d", &choice);
```

```
switch(choice) {
        case 1:
          playQuiz();
          break;
        case 2:
          readScore();
          break;
        case 3:
          printf("Thank you for playing!\n");
          break;
        default:
          printf("Invalid choice!\n");
      }
    } while(choice != 3);

    return 0;
}
```

```
/* function to start the math quiz */
void playQuiz() {
  int i, a, b, answer, userAnswer;
  int score = 0;
  char name[30];

  printf("\nEnter your name: ");
  scanf("%s", name);

  srand(time(NULL));
```

```
for(i = 0; i < 5; i++) {
 a = rand() % 10 + 1;
 b = rand() % 10 + 1;
 answer = a + b;

 printf("Question %d: %d + %d = ", i+1, a, b);
 scanf("%d", &userAnswer);

 if(userAnswer == answer) {
 score += 20;
 }
 }
```

```
printf("Your score: %d\n", score);
  saveScore(name, score);
}

/* function to save score into file */
void saveScore(char name[], int score) {
  FILE *fp;
  fp = fopen("score.txt", "a");

  if(fp != NULL) {
    fprintf(fp, "%s %d\n", name, score);
    fclose(fp);
  }
}
```

```
/* function to read score from file */
void readScore() {
  FILE *fp;
  struct Score data[100];
  int count = 0, i;

  fp = fopen("score.txt", "r");

  if(fp == NULL) {
    printf("No score data found.\n");
    return;
  }

  while(fscanf(fp, "%s %d", data[count].name,
&data[count].score) != EOF) {
    count++;
  }
```

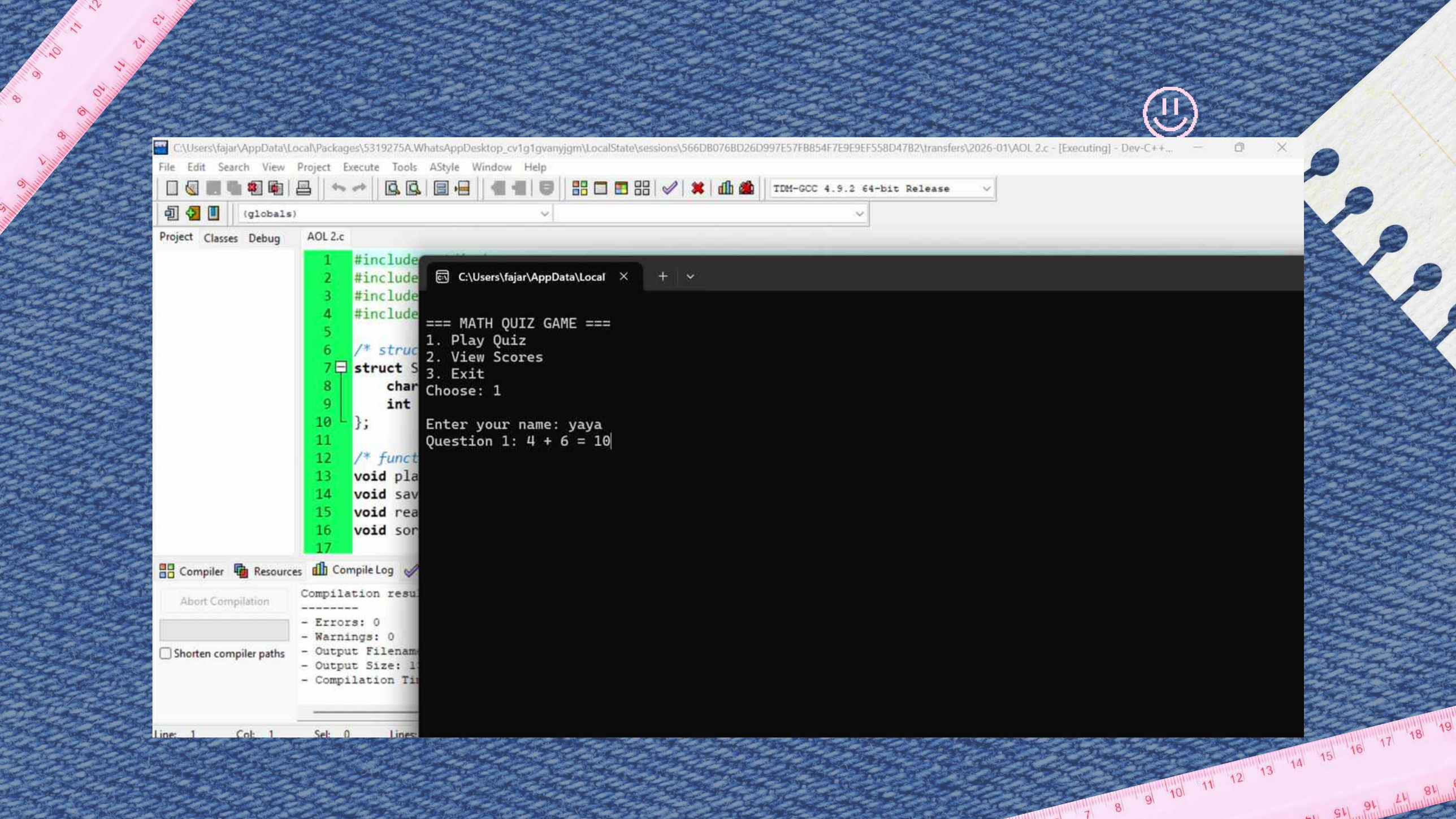
```
fclose(fp);

  sortScore(data, count);

  printf("\n=== SCORE BOARD ===\n");
  for(i = 0; i < count; i++) {
   printf("%d. %s - %d\n", i+1, data[i].name, data[i].score);
  }
}

/* function to sort score descending */
void sortScore(struct Score data[], int count) {
  int i, j;
  struct Score temp;
```

```
for(i = 0; i < count-1; i++) {
 for(j = i+1; j < count; j++) {
 if(data[i].score < data[j].score) {
 temp = data[i];
 data[i] = data[j];
 data[j] = temp;
 }
 }
 }
}
```


C:\Users\fajar\AppData\Local\Packages\5319275A.WhatsAppDesktop_cv1g1gvanyjgm\LocalState\sessions\566DB076BD26D997E57FB854F7E9E9EF558D47B2\transfers\2026-01\AOL 2.c - [Executing] - Dev-C++...
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
AOL 2.c
#include
#include
#include
#include
/* struc
struct S
char
int
};
/* funct
void pla
void sav
void rea
void sor
C:\Users\fajar\AppData\Local
=== MATH QUIZ GAME ===
1. Play Quiz
2. View Scores
3. Exit
Choose: 1
Enter your name: yaya
Question 1: 4 + 6 = 10
Compiler Resources Compile Log
Abort Compilation
Shorten compiler paths
Compilation resu
- Errors: 0
- Warnings: 0
- Output Filenam
- Output Size: 1
- Compilation Ti
Line: 1 Col: 1 Sel: 0 Lines:


Thank You