#include <stdio.h>

#include <stdlib.h>

#define MAX\_QUESTIONS 20

#define MAX\_PLAYERS 50

char questions[MAX\_QUESTIONS][200] =

{

"Which keyword is used to declare a variable in C?",

"What is the correct syntax to print in C?",

"Which data type is used to store a character?",

"Which of the following is a loop in C?",

"What symbol is used to end a statement in C?",

"Which function reads input from the user?",

"What does 'int' represent in C?",

"Which operator is used for comparison?",

"Which of these is a conditional statement?",

"Which function is the entry point of a C program?",

"How do you define a constant in C?",

"Which symbol is used for comments in C?",

"What does the 'return' keyword do?",

"Which header file is required for input/output functions?",

"What does '==' mean in C?",

"Which loop checks condition after execution?",

"Which operator is used to access array elements?",

"How do you declare an array of 10 integers?",

"Which function is used to find string length?",

"What will '5 % 2' return in C?"

};

char options[MAX\_QUESTIONS][4][100] =

{

{"A. var\t","B. let\n","C. int\t","D. define\n"},

{"A. echo()\t","B. print()\n","C. printf()\t","D. cout\n"},

{"A. char\t","B. string\n","C. character\t","D. text\n"},

{"A. if\t", "B. for\n", "C. switch\t","D. case\n"},

{"A. .\t", "B. ,\n", "C. ;\t", "D. :\n"},

{"A. input()\t", "B. scanf()\n", "C. gets()\t", "D. cin\n"},

{"A. integer\t", "B. instruction\n", "C. interval\t", "D. instance\n"},

{"A. =\t", "B. ==\n", "C. :=\t", "D. ===\n"},

{"A. for\t", "B. do\n", "C. if\t", "D. int\n"},

{"A. start()\t", "B. main()\n", "C. entry()\t", "D. init()\n"},

{"A. #define\t", "B. const\n", "C. constant\t", "D. fix\n"},

{"A. // comment\t", "B. <!>\n", "C. ##\t", "D. <!--comment-->\n"},

{"A. Ends the program\t", "B. Repeats a loop\n", "C. Starts main()\t", "D. Declares a variable\n"},

{"A. <input.h>\t", "B. <stdlib.h>\n", "C. <stdio.h>\t", "D. <conio.h>\n"},

{"A. Assignment\t", "B. Comparison\n", "C. Addition\t", "D. Address\n"},

{"A. for\t", "B. while\n", "C. do-while\t", "D. foreach\n"},

{"A. &\t", "B. []\n", "C. \*\t", "D. ()\n"},

{"A. int arr[10];\t", "B. int arr(10);\n", "C. int[10] arr;\t", "D. int arr = 10;\n"},

{"A. strlen()\t", "B. size()\n", "C. count()\t", "D. length()\n"},

{"A. 3\t", "B. 1\n", "C. 2\t", "D. 0\n"}

};

char correctAnswers[MAX\_QUESTIONS] =

{

'C', 'C', 'A', 'B', 'C','B', 'A', 'B', 'C', 'B','A', 'A', 'A', 'C', 'B','C', 'B', 'A', 'A', 'B'

};

char playerNames[MAX\_PLAYERS][50];

int playerScores[MAX\_PLAYERS];

int playerCount=0;

void copy(char dest[],char src[])

{

int i = 0;

while(src[i])

{

dest[i]=src[i];

i++;

}

dest[i]=0;

}

void addToLeaderboard(char name[],int score)

{

copy(playerNames[playerCount],name);

playerScores[playerCount]=score;

playerCount++;

}

void sortLeaderboard()

{

int i,j;

for (i=0;i<playerCount-1;i++)

{

for (j=0;j<playerCount-i-1;j++)

{

if(playerScores[j]<playerScores[j+1])

{

int tempScore=playerScores[j];

playerScores[j]=playerScores[j+1];

playerScores[j+1]=tempScore;

char tempName[50];

copy(tempName,playerNames[j]);

copy(playerNames[j],playerNames[j+1]);

copy(playerNames[j+1],tempName);

}

}

}

}

void showLeaderboard()

{

printf("\nLeaderboard:\n");

for (int i=0;i<playerCount;i++)

{

printf("%d.%s-%d\n",i+1,playerNames[i],playerScores[i]);

}

}

void startQuiz(char name[])

{

int score=0;

for (int i=0;i<MAX\_QUESTIONS;i++)

{

printf("Q%d:%s\n",i+1,questions[i]);

for (int j=0;j<4;j++)

{

printf("%s",options[i][j]);

}

char userAnswer;

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

scanf(" %c",&userAnswer);

if (userAnswer>='a' && userAnswer<='d')

{

userAnswer-=32;

}

else

{

printf("answer is inavlid!!\n");

}

if (userAnswer==correctAnswers[i])

{

printf("Correct!\n");

score++;

}

else

{

printf("Incorrect\nCorrect answer is %c\n\n",correctAnswers[i]);

}

}

printf("Final score for %s: %d / %d\n",name,score,MAX\_QUESTIONS);

addToLeaderboard(name,score);

}

int main()

{

int numPlayers;

printf("Hello\nLet's begin the quiz\n");

printf("How many players will play ?: ");

scanf("%d",&numPlayers);

for (int i=0;i<numPlayers;i++)

{

char name[50];

printf("\nEnter player %d name: ",i+1);

scanf("%s",name);

startQuiz(name);

}

sortLeaderboard();

showLeaderboard();

return 0;

}