iQuiZ game

MINI GAME GROUP PROJECT BY
CONCEPTUALIZERS

Contents

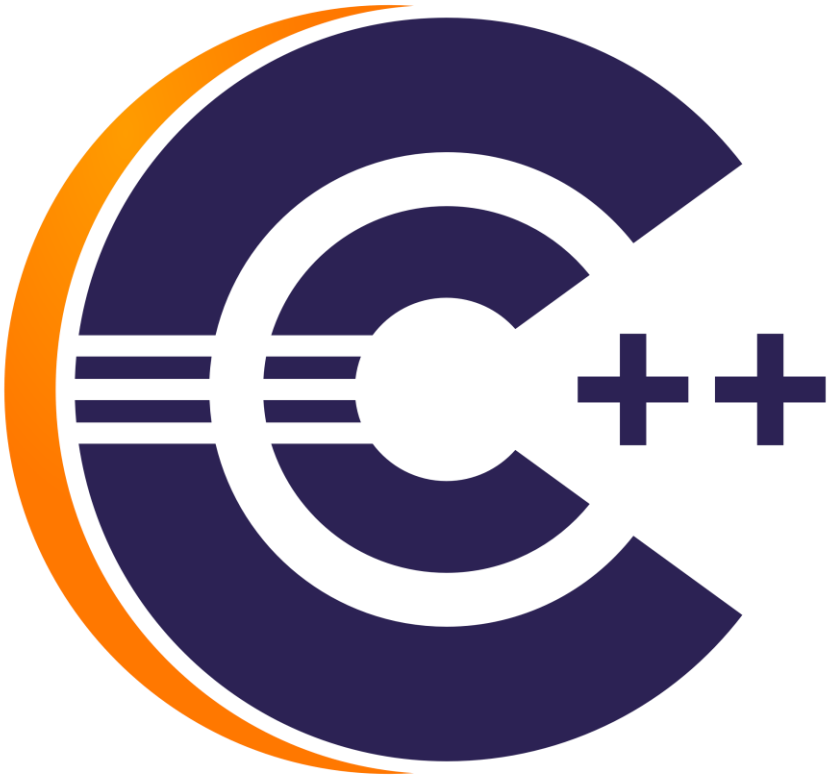
Basic documentation

Using C++ coding knowledge, we designed a simple game. It is a quiz type game. Most of the games are made only for fun purpose but here we tried to give some value to the meaning of the "game." In this game we checked IQ knowledge and general knowledge of the player.

For our demonstrating convenience, we used 4 levels, and each level has 5 questions. Those 5 questions are blended with IQ questions and general knowledge questions. If a player wants to continue the game, he or she should have a good general knowledge and IQ knowledge.

We could have created a quiz framed to a particular subject, but we used general knowledge and IQ questions to expand the players' mind in a comprehensive context.

However, if someone wants to add subject oriented questions in this game it could have easily been done.



Instructions

Before the game starts, the player should enter his/her name. After typing the name, he/she should press enter to find the instructions to play the game. That will be displayed as follows,

Instructions

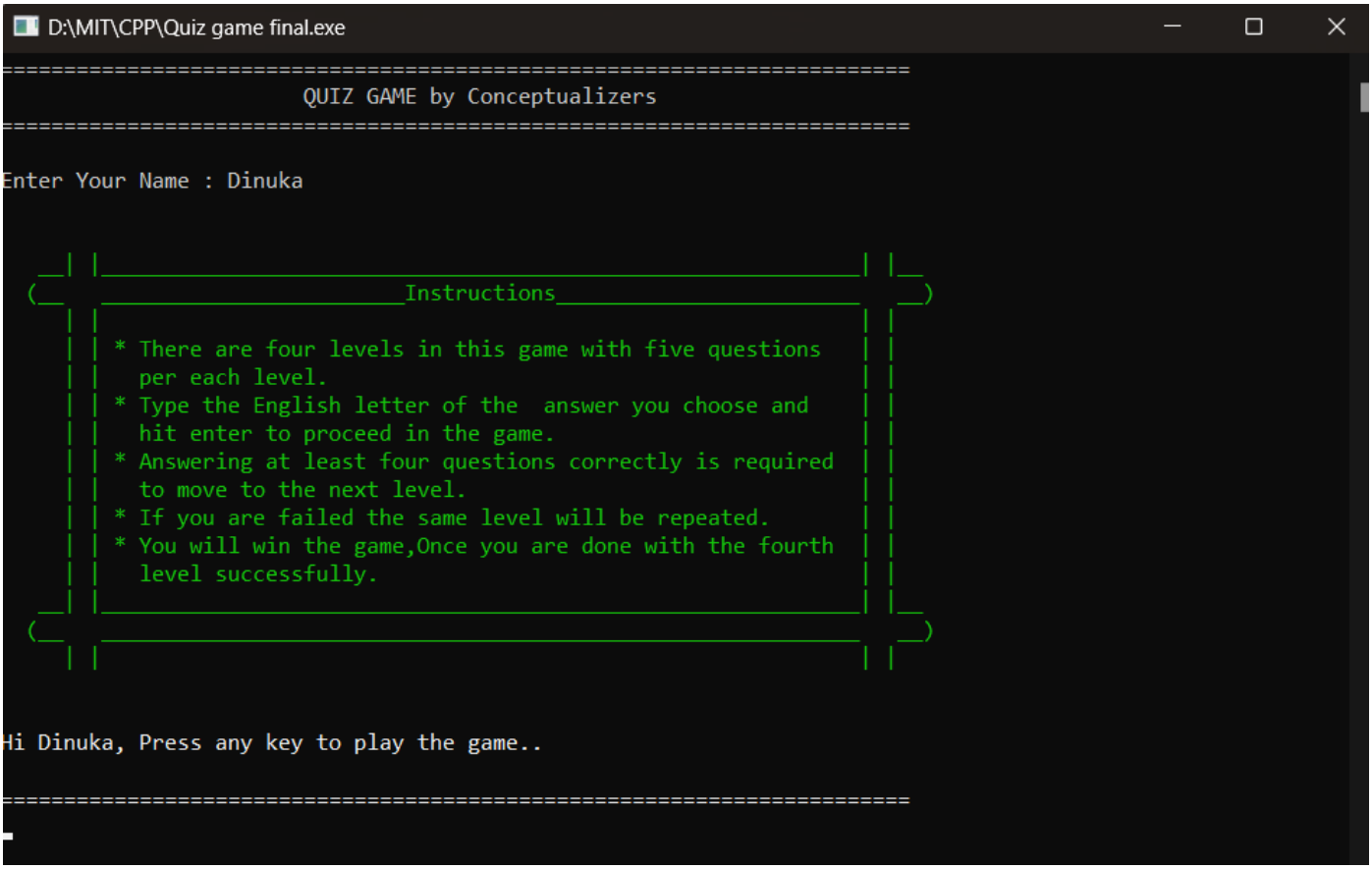
*There are four levels in this game with five questions per each level.

*Type the English letter of the answer you choose and hit enter to proceed in the game.

*Answering at least four questions correctly is required to move to the next level.

*If you failed, the same level will be repeated.

*You will win the game once you are done with the fourth level successfully.



Problems/challenges

The main challenge was limited knowledge about the C++ programming language in gaming context and no experience in developing games. However, we referred Google and YouTube to get an idea and we tested some online codes as well.

The second challenge was gathering all the team members to a one place. Almost all the members were busy with their academics and extra-curricular activities it was a challenge to gather all of them and focus to the purpose.

The third challenge was whether we add GUI to the game or not. We researched about GUI and understood that it is an entirely different coding method with different key words. After that, considering time constraint as well, we decided to do it in a simple way.

The fourth problem was, there were few possible ways for the player to go to the next question without hitting the enter button. When the player is playing, he/she must answer the question and hit the enter button for the next question. We felt that it is a burden for the player, but we could not figure out any method to fix this issue.

What would we have done differently if we could do it again

If we could do it again, we would add

1. More difficulty levels and more practical questions.
2. GUI to beautify the game.
3. Attractive emojis and sounds.
4. A Timer to answer questions within an appropriate time frame.
5. A code to generate a certificate automatically after the game is over.

Code

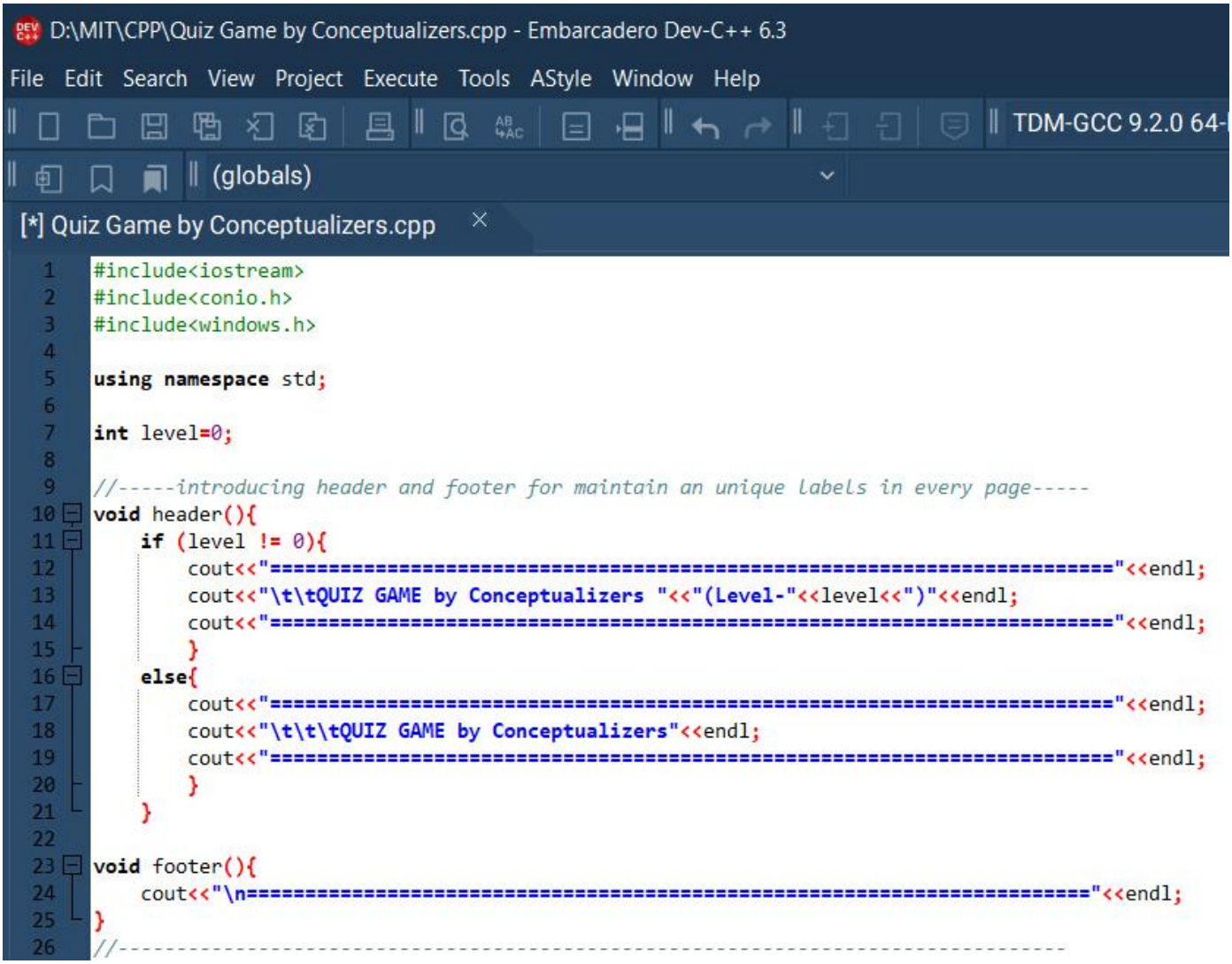
Libraries that we used to create the game.

- <iostream>
- <conio .h.>
- <windows. h>

Functions that we used to create the game.

- header();
- footer();
- sleep();
- system("CLS");
- getch();
- SetConsoleTextAttribute(h,11);

Here is the complete c++ code that we used to create the game.



```
27
28  int main(){
29
30      HANDLE h=GetStdHandle(STD_OUTPUT_HANDLE); // color changing code
31      char name[20];
32      int totScore;
33      string rslt[5][6]; // delcaring a 2D array for keeping whether the answer is correct or wrong
34
35      FILE *file;
36      file = fopen("Result_sheet.txt","w"); // creating result sheet file
37
38      header();
39      rslt[0][0] = "            ";
40      rslt[0][1] = "Q1";
41      rslt[0][2] = "Q2";
42      rslt[0][3] = "Q3";
43      rslt[0][4] = "Q4";
44      rslt[0][5] = "Q5";
45      rslt[1][0] = "Level-1";
46      rslt[2][0] = "Level-2";
47      rslt[3][0] = "Level-3";
48      rslt[4][0] = "Level-4";
49
```

```
50      cout << "\nEnter Your Name : ";
51      cin >> name;
52      cout << endl;
53      cout << endl;
54      SetConsoleTextAttribute(h,10);
55      cout << "    __| |_____________________________________________________| |__\n";
56      cout << "  (__   _____________________Instructions_____________________   __)\n";
57      cout << "     | |                                                     | |\n";
58      cout << "     | | * There are four levels in this game with five questions | |\n";
59      cout << "     | |   per each level.                                   | |\n";
60      cout << "     | | * Type the English letter of the  answer you choose and | |\n";
61      cout << "     | |   hit enter to proceed in the game.                 | |\n";
62      cout << "     | | * Answering at least four questions correctly is required | |\n";
63      cout << "     | |   to move to the next level.                        | |\n";
64      cout << "     | | * If you are failed the same level will be repeated. | |\n";
65      cout << "     | | * You will win the game,Once you are done with the fourth | |\n";
66      cout << "     | |   level successfully.                               | |\n";
67      cout << "    __| |_____________________________________________________| |__\n";
68      cout << "  (__   _____________________________________________________   __)\n";
69      cout << "     | |                                                     | |\n";
70      cout << endl;
71      SetConsoleTextAttribute(h,15);
72      cout << "\nHi " << name << ", Press any key to play the game.." << endl;
73      footer();
74      getch(); //wait for press any key from user
75
```

```
//=====================================================
//----------------Level-1 starting-----------------
//=====================================================
bool L1 = true; //this value is true until repeating the level
while (L1){
    //----------Level-1---Question-1------------------
    sleep(0.5); //pause the programme for 0.5 secs
    system ("CLS"); //clear the console for continue to the next step
    level = 1;
    SetConsoleTextAttribute(h,11);
    header();
    int L1tot=0;
    char q1a,q2a,q3a,q4a,q5a;

    cout<<"\nQ1. How many overs are there in a one day cricket match? \n\n\t a. 10 \n\t b. 20 \n\t c. 50 \n\t d. 60 \n\nYour Answer : ";

    cin>>q1a;
    if(q1a=='c'){
        L1tot=L1tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[1][1] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[1][1] = "W";
    }
    footer();

    //----------Level-1---Question-2------------------
    sleep(1);
    system ("CLS");
    header();

    cout<<"\nQ2. How many districts are there in Sri Lanka? \n\n\t a. 22 \n\t b. 25 \n\t c. 26 \n\t d. 28 \n\nYour Answer : ";
    cin>>q2a;
    if(q2a=='b'){
        L1tot=L1tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[1][2] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[1][2] = "W";
    }
    footer();

    //----------Level-1---Question-3------------------
    sleep(1);
    system ("CLS");
    header();

    cout<<"\nQ3. What is the highest waterfall in Srilanka? \n\n\t a. Bambarakanda \n\t b. Dunhinda \n\t c. Bakers fall \n\t d. Stclairs \n\nYour Answer : ";
    cin>>q3a;
    if(q3a=='a'){
        L1tot=L1tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[1][3] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[1][3] = "W";
    }
    footer();
```

```
    //----------Level-1---Question-4------------------
    sleep(1);
    system ("CLS");
    header();

    cout<<"\nQ4. Who was the first person to discover 'Gravity'? \n\n\t a. Albert Ainstain \n\t b. Newton \n\t c. Stephn Howkings \n\t d. Maari curi \n\nYour Answ
    cin>>q4a;
    if(q4a=='b'){
        L1tot=L1tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[1][4] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[1][4] = "W";
    }
    footer();

    //----------Level-1---Question-5------------------
    sleep(1);
    system ("CLS");
    header();

    cout<<"\nQ5. How many centimeters ara there in a meter? \n\n\t a. 5 \n\t b. 10 \n\t c. 100 \n\t d. 1000 \n\nYour Answer : ";
    cin>>q5a;
    if(q5a=='c'){
        L1tot=L1tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[1][5] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[1][5] = "W";
    }
    footer();
```

```
    //----------Level-1---Results----------------------
    sleep(1);
    system ("CLS");
    header();
    if (L1tot>3){
        cout << endl;
        cout << "      ***********   **********   *****     ***   ***********  ************        ***     ************ ************   ****   \n";
        cout << "     ************  ************  ******    ***  ************  ************       *****    ************ ************  ******  \n";
        cout << "     ***           ***      ***  *******   ***  ***           ***       ***      *** ***        ***           ****    ******  \n";
        cout << "     ***           ***      ***  *** **** ***  ***   ******  ************     ***   ***       ***          ****     ******  \n";
        cout << "     ***           ***      ***  ***  **** ***  ***   ******  ************     ***********      ***         ****       ****   \n";
        cout << "     ***           ***      ***  ***   *******  ***      ***  ***     ***     ************     ***        ****         **    \n";
        cout << "     ************  ************  ***    ******  ************  ***      ***   ***         ***    ***      ************   ****   \n";
        cout << "      ***********   **********   ***     *****   **********   ***       *** ***          ***   ***      ************   ****   \n";
        cout << endl;

        cout << name <<  ", you have successfully completed Level 1";
        cout << "\nYou scored " << L1tot << " out of 5";
        cout << "\n\nPress any key to continue to Level 2";
        footer();
        getch();
        totScore += L1tot;
        L1 = false;
    }
    else{
        cout << endl;
        cout << "      **********    **********   ************   ************  ***        ***   ****   \n";
        cout << "     ************  ************  ************   ************  ***      ***   ******  \n";
        cout << "     ***           ***      ***  ***       ***  ***       ***   ***    ***   ******  \n";
        cout << "     ***********   ***      ***  ************   ************     *** ***     ******  \n";
        cout << "      ***********  ***      ***  ************   ************        ***        ****   \n";
        cout << "              ***  ***      ***  ***      ***   ***      ***        ***         **    \n";
        cout << "     ************  ************  ***      ***   ***      ***        ***        ****   \n";
        cout << "      **********    **********   ***       ***  ***       ***       ***        ****   \n";
        cout << endl;
```

```
            cout << name << ", you have to play again" << endl;
            cout << "You scored " << L1tot << " out of 5" << endl;
            cout << "you should attain at least 4 marks to enter the level 2";
            cout<<"\n\nPress any key to play again..";
            getch();
        }
    }
```

The rest of the levels here are coded in same way and the questions become more difficult from level to level.

```
    //=====================================================
    //---------------Level-2 starting-----------------
    //=====================================================
    bool L2 = true;
    while (L2){
        //----------Level-2---Question-1------------------
        sleep(0.5);
        system ("CLS");
        level = 2;
        SetConsoleTextAttribute(h,14);
        header();
        int L2tot=0;
        char q1a,q2a,q3a,q4a,q5a;

        cout<<"\nQ1. How many states are there in India? \n\n\t a. 13 \n\t b. 35 \n\t c. 50 \n\t d. 60  \n\nYour Answer : ";
        cin>>q1a;
        if(q1a=='d'){
            L2tot=L2tot+1;
            cout<<"\nGreat! Your answer is Correct!";
            rslt[2][1] = "C";
        }
        else{
            cout<<"\nSorry your answer is wrong!";
            rslt[2][1] = "W";
        }
        footer();
```

```
        header();
        cout<<"\nQ2. What is Hitler's birth country? \n\n\t a. Austria \n\t b. Germany \n\t c. Russia \n\t d. Italy \n\nYour Answer : ";
        cin>>q2a;
        if(q2a=='a'){
            L2tot=L2tot+1;
            cout<<"\nGreat! Your answer is Correct!";
            rslt[2][2] = "C";
        }
        else{
            cout<<"\nSorry your answer is wrong!";
            rslt[2][2] = "W";
        }
        footer();

        //----------Level-2---Question-3------------------
        sleep(1);
        system ("CLS");
        header();
        cout << "\t\t_____" << endl;
        cout << "\t\t|\t|\t|\t|\t|\t|" << endl;
        cout << "\t\t|\t|\t|\t|\t|\t|" << endl;
        cout << "\t\t|_______|_______|_______|_______|_______|" << endl;
        cout<<"\nQ3. How many squares are there in the above figure?? \n\n\t a. 10 \n\t b. 12 \n\t c. 15 \n\t d. 20 \n\nYour Answer : ";
        cin>>q3a;
        if(q3a=='c'){
            L2tot=L2tot+1;
            cout<<"\nGreat! Your answer is Correct!";
            rslt[2][3] = "C";
        }
        else{
            cout<<"\nSorry your answer is wrong!";
            rslt[2][3] = "W";
        }
        footer();
```

```
287     //----------Level-2---Question-4------------------
288     sleep(1);
289     system ("CLS");
290     header();
291     cout<<"\nQ4. What is the largest island in Sri Lanka? \n\n\t a. Delft \n\t b. Parawi \n\t c. Kayts \n\t d. Mannar \n\nYour Answer : ";
292     cin>>q4a;
293     if(q4a=='d'){
294         L2tot=L2tot+1;
295         cout<<"\nGreat! Your answer is Correct!";
296         rslt[2][4] = "C";
297     }
298     else{
299         cout<<"\nSorry your answer is wrong!";
300         rslt[2][4] = "W";
301     }
302     footer();
303
```

```
303
304     //----------Level-2---Question-5------------------
305     sleep(1);
306     system ("CLS");
307     header();
308     cout << "\t\t_____________________________" << endl;
309     cout << "\t\t|\t|\t|\t|" << endl;
310     cout << "\t\t|   7   |   4   |   6   |" << endl;
311     cout << "\t\t|_______|_______|_______|" << endl;
312     cout << "\t\t|\t|\t|\t|" << endl;
313     cout << "\t\t|   6   |   5   |   8   |" << endl;
314     cout << "\t\t|_______|_______|_______|" << endl;
315     cout << "\t\t|\t|\t|\t|" << endl;
316     cout << "\t\t|   2   |   _   |   9   |" << endl;
317     cout << "\t\t|_______|_______|_______|" << endl;
318     cout<<"\nQ5. Which number should fill the blank? \n\n\t a. 2 \n\t b. 4 \n\t c. 6 \n\t d. 7 \n\nYour Answer : ";
```

```
319     cin>>q5a;
320     if(q5a=='a'){
321         L2tot=L2tot+1;
322         cout<<"\nGreat! Your answer is Correct!";
323         rslt[2][5] = "C";
324     }
325     else{
326         cout<<"\nSorry your answer is wrong!";
327         rslt[2][5] = "W";
328     }
329     footer();
330
```

```
331 //----------Level-2---Results---------------------
332 sleep(1);
333 system ("CLS");
334 header();
335 if (L2tot>3){
336     cout << endl;
337     cout << "      ***********   **********   *****     ***   ***********  ************        ***     ************ ************   ****   \n";
338     cout << "     ************  ************  ******    ***  ************  ************       *****    ************ ************  ******  \n";
339     cout << "     ***           ***      ***  *******   ***  ***           ***       ***      *** ***        ***          ****    ******  \n";
340     cout << "     ***           ***      ***  *** ****  ***  ***   ******  ************     ***   ***       ***           ****    ******  \n";
341     cout << "     ***           ***      ***  ***  **** ***  ***   ******  ************    ************     ***         ****       ****   \n";
342     cout << "     ***           ***      ***  ***   *******  ***      ***  ***      ***    **************    ***        ****         **    \n";
343     cout << "     ************  ************  ***    ******  ************  ***      ***   ***         ***    ***      ************   ****   \n";
344     cout << "      ***********   **********   ***     *****   **********   ***      *** ***          ***   ***      ************   ****   \n";
345     cout << endl;
346
347     cout << name <<  ", you have successfully completed Level 2";
348     cout << "\nYou scored " << L2tot << " out of 5";
349     cout << "\n\nPress any key to continue to Level 3";
350     footer();
351     getch();
352     totScore += L2tot;
353     L2 = false;
354 }
355 else{
356     cout << endl;
357     cout << "      **********    **********   ************  ************  ***       ***   ****   \n";
358     cout << "     ************  ************  ************  ************  ***       ***   ******  \n";
359     cout << "     ***           ***      ***  ***        ***  ***        ***   ***    ***   ******  \n";
360     cout << "     ************  ***      ***  ************  ************     *** ***      ******  \n";
361     cout << "      ***********  ***      ***  ************  ************        ***       ****   \n";
362     cout << "           ***     ***      ***  ***      ***  ***      ***        ***       **    \n";
363     cout << "     ************  ************  ***       ***  ***       ***       ***       ****   \n";
364     cout << "      **********    **********   ***       ***  ***       ***       ***       ****   \n";
365     cout << endl;
366
```

```
            cout << name << ", you have to play again" << endl;
            cout << "You scored " << L2tot << " out of 5" << endl;
            cout << "you should attain at least 4 marks to enter the level 3";
            cout<<"\n\nPress any key to play again..";
            getch();
        }
    }

//=====================================================
//----------------Level-3 starting------------------
//=====================================================
bool L3 = true;
while (L3){
    //----------Level-3---Question-1------------------
    sleep(0.5);
    system ("CLS");
    level = 3;
    SetConsoleTextAttribute(h,11);
    header();
    int L3tot=0;
    char q1a,q2a,q3a,q4a,q5a;

    cout<<"\nQ1. What is the currency of Malaysia? \n\n\t a. Ruffiya \n\t b. Riggit \n\t c. Rupiah \n\t d. Ruffee  \n\nYour Answer : ";
    cin>>q1a;
    if(q1a=='b'){
        L3tot=L3tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[3][1] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[3][1] = "W";
    }
    footer();

    //----------Level-3---Question-2------------------
    sleep(1);
    system ("CLS");
    header();
    cout << "\n\t_____" << endl;
    cout << "\t|\t|\t|\t|\t|\t|" << endl;
    cout << "\t|   1   |   8   |  18   |   75  |  ___  |" << endl;
    cout << "\t|_______|_______|_______|_______|_______|" << endl;
    cout<<"\n\nQ2. What will be the next number? \n\n\t a. 126 \n\t b. 143 \n\t c. 150 \n\t d. 225 \n\nYour Answer : ";
    cin>>q2a;
    if(q2a=='a'){
        L3tot=L3tot+1;
        cout<<"\nGreat Your answer is Correct!";
        rslt[3][2] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[3][2] = "W";
    }
    footer();

    //----------Level-3---Question-3------------------
    sleep(1);
    system ("CLS");
    header();
    cout<<"\nQ3. Who is the most famous fictional character in the world? \n\n\t a. Harry Potter \n\t b. Peter Pan \n\t c. Sherlock Holmes \n\t d. Joker \n\nYour
    cin>>q3a;
    if(q3a=='c'){
        L3tot=L3tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[3][3] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[3][3] = "W";
```

```
//----------Level-3---Question-4------------------
sleep(1);
system ("CLS");
header();
cout<<"\nQ4. How many mobile apps are downloaded everyday? \n\n\t a. 5 million \n\t b. 25 million \n\t c. Over 100 million \n\t d. Over 1 billion \n\nYour Ans
cin>>q4a;
if(q4a=='c'){
    L3tot=L3tot+1;
    cout<<"\nGreat! Your answer is Correct!";
    rslt[3][4] = "C";
}
else{
    cout<<"\nSorry your answer is wrong!";
    rslt[3][4] = "W";
}
footer();
```

```
//----------Level-3---Question-5------------------
sleep(1);
system ("CLS");
header();
cout<<"\n\t16, 39, 63, 90, 120";
cout<<"\n\t18, 36, 60, 88, 120";
cout<<"\n\nQ5. In the two numerical sequences above,\
\n    none number that appears in the top sequence should appear\
\n    in the bottom sequence and vice versa.\
\n    Which two numbers should be changed round? \n\n\t a. 16 and 18 \n\t b. 39 and 36 \n\t c. 63 and 60 \n\t d. 90 and 88 \n\nYour Answer : ";
```

```
cin>>q5a;
if(q5a=='a'){
    L3tot=L3tot+1;
    cout<<"\nGreat! Your answer is Correct!";
    rslt[3][5] = "C";
}
else{
    cout<<"\nSorry your answer is wrong!";
    rslt[3][5] = "W";
}
footer();

//----------Level-3---Results----------------------
sleep(1);
system ("CLS");
header();
if (L3tot>3){
    cout << endl;
    cout << "      **********   **********   *****     ***   **********  ***********         ***     ************ ***********   ****   \n";
    cout << "     ************  ***********  ******    ***  ************ ************       *****    ************ ***********  ******  \n";
    cout << "     ***           ***      ***  *******   ***  ***          ***        ***      *** ***        ***          ****    ******  \n";
    cout << "     ***           ***      ***  *** ****  ***  ***   ******  ************     ***   ***       ***          ****    ******  \n";
    cout << "     ***           ***      ***  ***  **** ***  ***   ******  ***********      ***********      ***        ****       ****  \n";
    cout << "     ***           ***      ***  ***   *******  ***      ***  ***     ***     ************     ***       ****         **   \n";
    cout << "     ************  ***********  ***    ******  ***********  ***      ***   ***         ***    ***     ************   ****  \n";
    cout << "      **********   **********   ***     *****   **********  ***       *** ***          ***   ***     ************   ****  \n";
    cout << endl;

    cout << name <<  ", you have successfully completed Level 3";
    cout << "\nYou scored " << L3tot << " out of 5";
    cout << "\n\nPress any key to continue to Level 4";
    footer();
    getch();
    totScore += L3tot;
    L3 = false;
}
```

```
  }
  else{
      cout << endl;
      cout << "      **********    **********   ***********   ***********  ***        ***    ****   \n";
      cout << "     ************  ************  ************  ************  ***      ***    ******  \n";
      cout << "     ***           ***      ***  ***        ***  ***        ***   ***    ***    ******  \n";
      cout << "     ***********   ***      ***  ************  ************     *** ***     ******  \n";
      cout << "      **********   ***      ***  ************  ************        ***         ****   \n";
      cout << "               ***  ***      ***  ***      ***    ***      ***         ***          **    \n";
      cout << "     ************  ************  ***       ***   ***       ***         ***         ****   \n";
      cout << "      **********    **********   ***       ***   ***       ***         ***         ****   \n";
      cout << endl;

      cout << name << ", you have to play again" << endl;
      cout << "You scored " << L3tot << " out of 5" << endl;
      cout << "you should attain at least 4 marks to enter the level 4";
      cout<<"\n\nPress any key to play again..";
      getch();
```

```
    //=====================================================
    //----------------Level-4 starting-------------------
    //=====================================================
    bool L4 = true;
    while (L4){
        //----------Level-4---Question-1-------------------
        sleep(0.5);
        system ("CLS");
        level = 4;
        SetConsoleTextAttribute(h,14);
        header();
        int L4tot=0;
        char q1a,q2a,q3a,q4a,q5a;
        cout<<"\n\tA B C D E F G H";
        cout<<"\n\nQ1. What letter is three to the right of the letter immediately to\
        \n    the left of the letter three to the left of the letter two to the\
        \n    right of the letter F ? \n\n\t a. B \n\t b. C \n\t c. F \n\t d. G  \n\nYour Answer : ";
        cin>>q1a;
        if(q1a=='d'){
            L4tot=L4tot+1;
            cout<<"\nGreat Your answer is Correct!";
            rslt[4][1] = "C";
        }
        else{
            cout<<"\nSorry your answer is wrong!";
            rslt[4][1] = "W";
        }
        footer();
```

```
        //----------Level-4---Question-2-------------------
        sleep(1);
        system ("CLS");
        header();
        cout<<"\nQ2. What is the colour that babies recognize first when their\
        \n    colour vision begins to develop?\
        \n\n\t a. Yellow \n\t b. Green \n\t c. Blue \n\t d. Red \n\nYour Answer : ";
        cin>>q2a;
        if(q2a=='d'){
            L4tot=L4tot+1;
            cout<<"\nGreat! Your answer is Correct!";
            rslt[4][2] = "C";
        }
        else{
            cout<<"\nSorry your answer is wrong!";
            rslt[4][2] = "W";
        }
        footer();
```

```
    //----------Level-4---Question-3-------------------
    sleep(1);
    system ("CLS");
    header();
    cout<<"\nQ3. Five years ago, the total of the ages of a father and his son was 40 years.\
    \n    The ratio of their present ages is 4 : 1\
    \n    What is the present age of the father? \n\n\t a. 20 years \n\t b. 30 years \n\t c. 40 years \n\t d. 50 years \n\nYour Answer : ";
    cin>>q3a;
    if(q3a=='c'){
        L4tot=L4tot+1;
        cout<<"\nGreat! Your answer is Correct!";
        rslt[4][3] = "C";
    }
    else{
        cout<<"\nSorry your answer is wrong!";
        rslt[4][3] = "W";
    }
```

```
//----------Level-4---Question-4------------------
sleep(1);
system ("CLS");
header();
cout<<"\nQ4. What is the book written by Mohan Munasinghe,\
\n    the Sri Lankan Nobel prize winner in 2021? \
 \n\n\t a. Sustainability in the Twenty-First Century (2019) \n\t b. Capital in the Twenty-First Century(2014)\
  \n\t c. Nomadland: Surviving America in the twenty-first century (2017) \n\t d. The Stranger of Twenty-First Century(2015) \n\nYour Answer : ";
cin>>q4a;
if(q4a=='a'){
    L4tot=L4tot+1;
    cout<<"\nGreat! Your answer is Correct!";
    rslt[4][4] = "C";
}
else{
    cout<<"\nSorry your answer is wrong!";
    rslt[4][4] = "W";
}
footer();
```

```
//----------Level-4---Question-5------------------
sleep(1);
system ("CLS");
header();
cout << "\n\t_____________________________" << "\t_____________________________" << endl;
cout << "\t|\t|\t|\t|" << "\t|\t|\t|\t|" << endl;
cout << "\t|   2   |   3   |   2   |" << "\t|   3   |   4   |   3   |" << endl;
cout << "\t|_______|_______|_______|" << "\t|_______|_______|_______|" << endl;
cout << "\t|\t|\t \t|" << "\t|\t|\t \t|" << endl;
cout << "\t|   4   |       9       |" << "\t|   9   |      48       |" << endl;
cout << "\t|_______|_______________|" << "\t|_______|_______________|" << endl;
cout << endl;
cout << "\n\t_____________________________" << "\t_____________________________" << endl;
cout << "\t|\t|\t|\t|" << "\t|\t|\t|\t|" << endl;
cout << "\t|   4   |   5   |   4   |" << "\t|   a   |   b   |   c   |" << endl;
cout << "\t|_______|_______|_______|" << "\t|_______|_______|_______|" << endl;
cout << "\t|\t|\t \t|" << "\t|\t|\t \t|" << endl;
cout << "\t|  16   |      625      |" << "\t|   d   |       e       |" << endl;
cout << "\t|_______|_______________|" << "\t|_______|_______________|" << endl;
cout<<"\nQ5. What is the answer that fits the above blanks a,b,c,d,e respectively?\
 \n\n\t a. 20, 25, 8, 6, 2550 \n\t b. 40, 6, 5, 25, 7776 \n\t c. 1250, 25, 60, 8 \n\t d. 25, 8, 16, 8555 \n\nYour Answer : ";
cin>>q5a;
if(q5a=='b'){
    L4tot=L4tot+1;
    cout<<"\nGreat! Your answer is Correct!";
    rslt[4][5] = "C";
}
else{
    cout<<"\nSorry your answer is wrong!";
    rslt[4][5] = "W";
}
footer();
```

```
    ...
//----------Level-4---Results---------------------
sleep(1);
system ("CLS");
header();
if (L4tot>3){
    cout << endl;
    cout << "      ***********   **********   *****     ***   ***********  ***********        ***     ************ ***********   ****   \n";
    cout << "     ************ ************ ******    ***  ************ ************      *****    ************ ***********  ******  \n";
    cout << "     ***          ***      ***  *******   ***  ***          ***       ***      *** ***         ***          ****    ******  \n";
    cout << "     ***          ***      ***  *** ****  ***  ***   ******  ************     ***  ***       ***          ****    ******  \n";
    cout << "     ***          ***      ***  ***  **** ***  ***   ******  ************    ***********     ***         ****       ****   \n";
    cout << "     ***          ***      ***  ***   *******  ***       ***   ***     ***    *************    ***        ****         **    \n";
    cout << "     ************ ************ ***    ******  ************ ***      ***   ***         ***     ***     ************   ****   \n";
    cout << "      ***********   **********  ***     *****   **********  ***       *** ***          ***    ***     ************   ****   \n";
    cout << endl;

    cout << name <<  ", you have successfully completed Level 4";
    cout << "\nYou scored " << L4tot << " out of 5";
    footer();
```

```
    sleep(2);
    totScore += L4tot;
    L4 = false;
}
else{
    cout << endl;
    cout << "      **********    **********   ************   ************  ***        ***   ****   \n";
    cout << "     ************ ************ ************** ************** ***      ***   ******  \n";
    cout << "     ***          ***      ***  ***        ***  ***        ***   ***    ***   ******  \n";
    cout << "     ************ ***      ***  **************  **************     *** ***      ******  \n";
    cout << "      ************ ***      ***  ************   ************         ***         ****   \n";
    cout << "           ***  ***      ***  ***     ***    ***     ***          ***         **    \n";
    cout << "     ************ ************ ***      ***   ***      ***         ***         ****   \n";
    cout << "      **********    **********  ***       ***  ***       ***       ***         ****   \n";
    cout << endl;

    cout << name << ", you have to play again" << endl;
    cout << "You scored " << L4tot << " out of 5" << endl;
    cout << "you should attain at least 4 marks to finish the game";
    cout<<"\n\nPress any key to play again..";
    getch();
```

When the player completes 4 levels successfully we let the player see something like “you won!”.

```
    //=======================================================
    //----------------You win----------------------
    //=======================================================

    system ("CLS");
    level=0;
    SetConsoleTextAttribute(h,10);
    header();

    cout<<"\n"<< name << ", You have completed all levels successfully!" << endl;

    cout<<endl;
    cout<<endl;

    cout << "      ***         ***    **********    ***       ***  \n";
    cout << "       ***       ***    ************  ***       ***  \n";
    cout << "        ***     ***     ***        ***  ***       ***  \n";
    cout << "         *** ***        ***        ***  ***       ***  \n";
    cout << "           ***          ***        ***  ***       ***  \n";
    cout << "           ***          ***        ***  ***       ***  \n";
    cout << "           ***          ************  ************  \n";
    cout << "           ***           **********    **********   \n";

    cout<<endl;

    cout << "      ***            ***    **********    *****      ***    ****   \n";
    cout << "      ***            ***   ************  ******     ***   ******  \n";
    cout << "      ***     **     ***   ***        ***  *******    ***   ******  \n";
    cout << "      ***    ****    ***   ***        ***  *** ****   ***   ******  \n";
    cout << "      ***   ******   ***   ***        ***  ***  **** ***    ****   \n";
    cout << "      ********  ********   ***        ***  ***    ********     **    \n";
    cout << "      ******     ******   ************  ***     ******    ****   \n";
    cout << "      *****       *****    **********   ***      *****    ****   \n";

    cout<<endl;
```

Here you will see that at the end of each question the correct answer or wrong answer is given as 'C' and 'W' in a 2D Array. Finally, a result sheet will be prepared in the same folder where game is located.

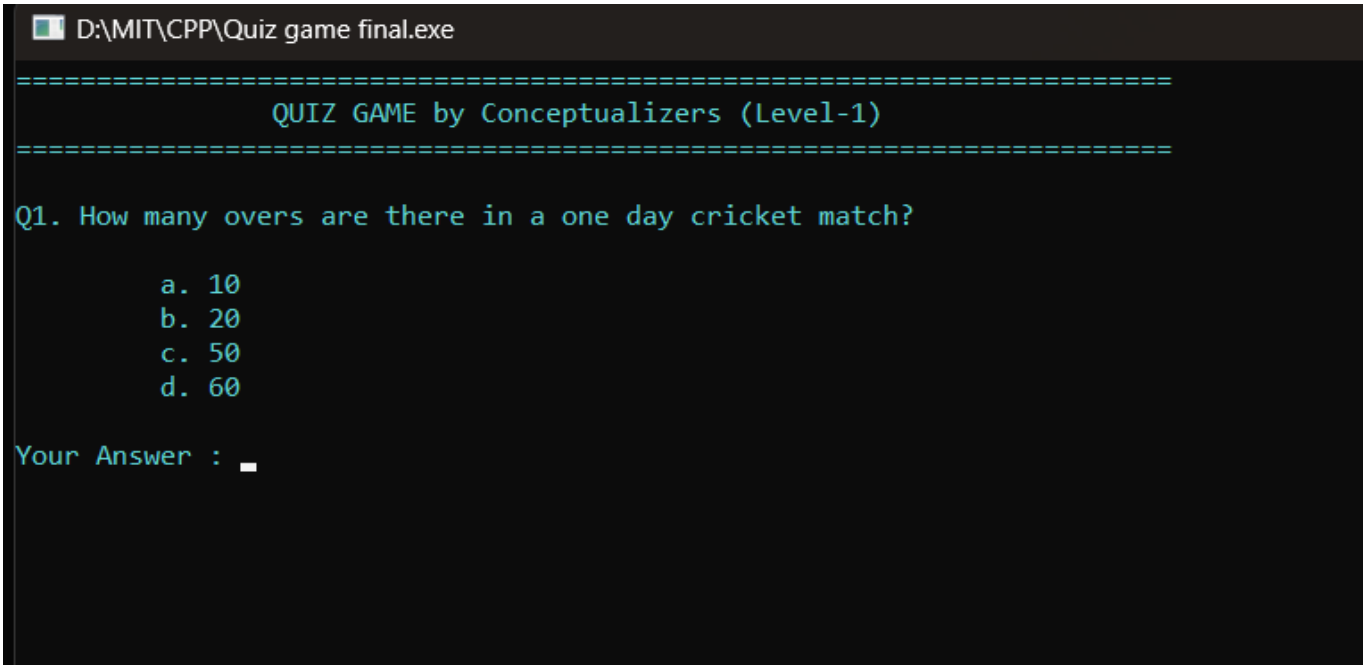
```
    cout<<"You scored " << totScore <<" marks out of 20 marks!"<<endl;
    cout<<"\nThank you very much for your participation!" <<endl;

    cout<<"\n\nPress any key to generate your result sheet.." <<endl;
    getch();

    system ("CLS");
    header();

    fprintf(file,"%s, this is your result sheet\n\n",name);

    //Putting the data in the 2D array into the file
    fprintf(file,"%s       %s          %s          %s          %s          %s\n",rslt[0][0].c_str(),rslt[0][1].c_str(),rslt[0][2].c_str(),rslt[0][3].c_str(),rslt[0][4
    fprintf(file,"\n%s       %s          %s          %s          %s          %s\n",rslt[1][0].c_str(),rslt[1][1].c_str(),rslt[1][2].c_str(),rslt[1][3].c_st
    fprintf(file,"%s        %s          %s          %s          %s          %s\n",rslt[2][0].c_str(),rslt[2][1].c_str(),rslt[2][2].c_str(),rslt[2][3].c_str(
    fprintf(file,"%s        %s          %s          %s          %s          %s\n",rslt[3][0].c_str(),rslt[3][1].c_str(),rslt[3][2].c_str(),rslt[3][3].c_str(
    fprintf(file,"%s        %s          %s          %s          %s          %s\n",rslt[4][0].c_str(),rslt[4][1].c_str(),rslt[4][2].c_str(),rslt[4][3].c_str(

    fprintf(file,"\nYou scored %d marks out of 20 marks!\n",totScore);
    fprintf(file,"\nGood luck!\n");
    fclose(file);

    cout<<"\n\nYour results sheet has been generated successfully!\n" <<endl;
    footer();
```

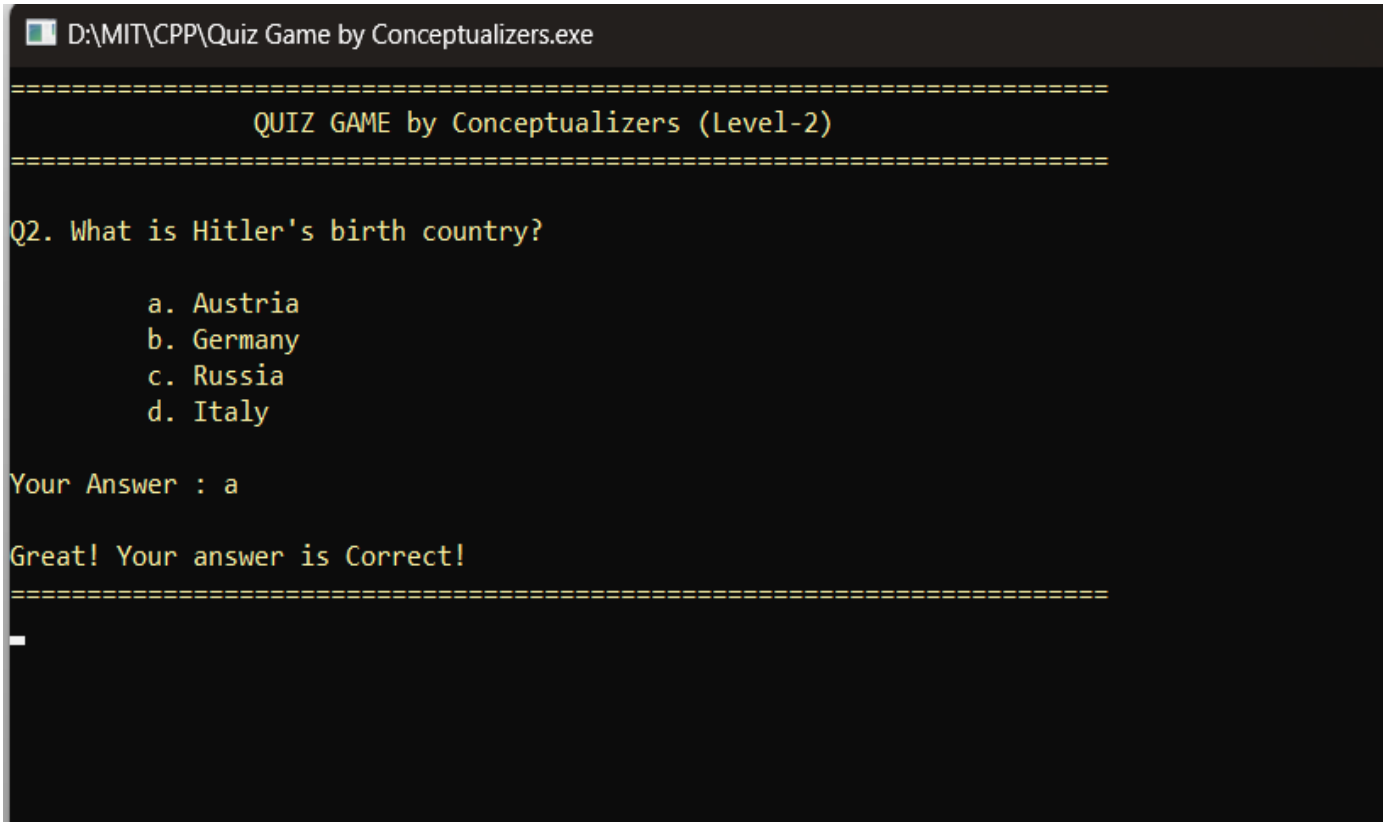
Here finally we display game credits.

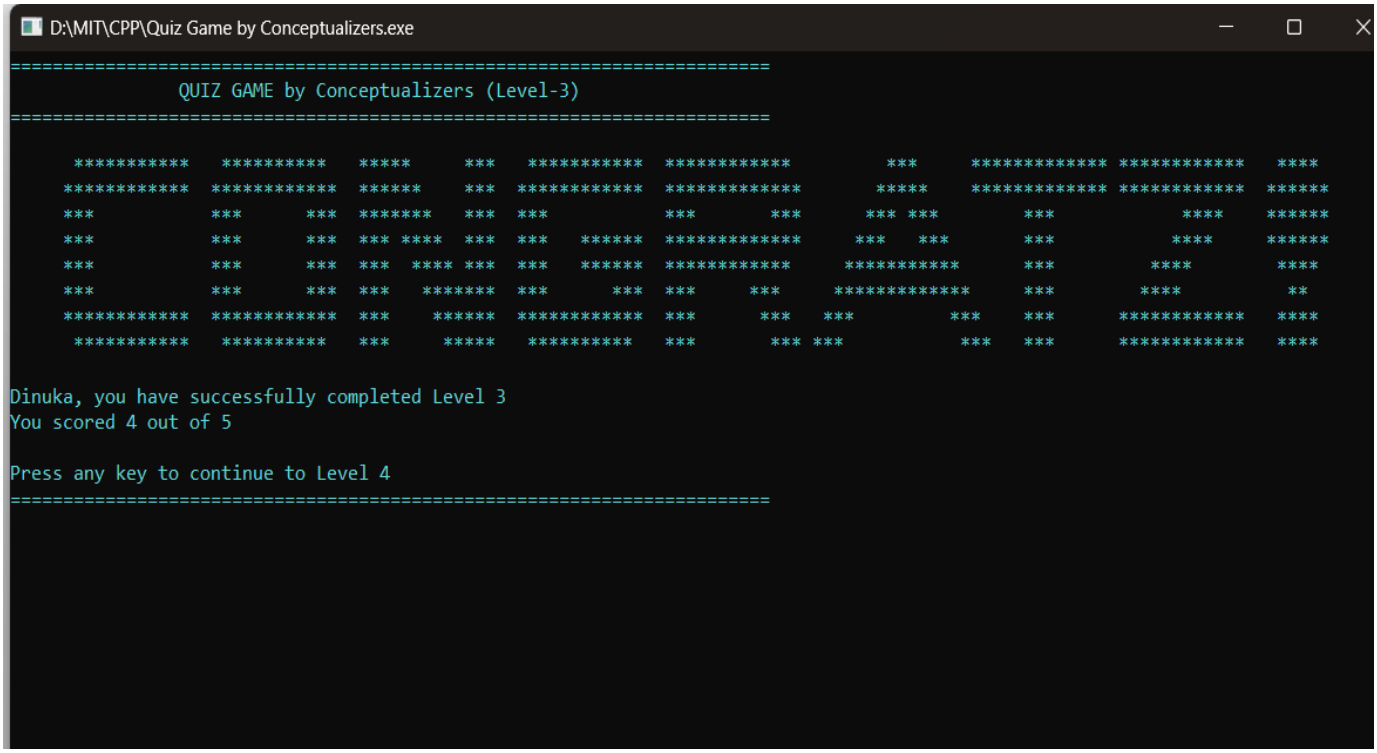
```
    sleep(1);
    cout << "\n\nCredits goes to,";
    sleep(1);

    //conceptualizers group members
    SetConsoleTextAttribute(h,13);
    cout << "\n\n\t Sachintha Dinuka\t-\tIM/2020/009";
    sleep(1);
    cout << "\n\t Shanuka Dilshan\t-\tIM/2020/017";
    sleep(1);
    cout << "\n\t Anuji Vithana\t\t-\tIM/2020/033";
    sleep(1);
    cout << "\n\t Vidul Pramitha\t\t-\tIM/2020/088";
    sleep(1);
    cout << "\n\t Ushari Egodawele\t-\tIM/2020/109\n";
    sleep(1);
    SetConsoleTextAttribute(h,10);

    return 0;
}
```

Output interface

In each level player is being asked to answer for the questions like this. After the player answered the question and should hit the enter button and automatically prompt to the next question.

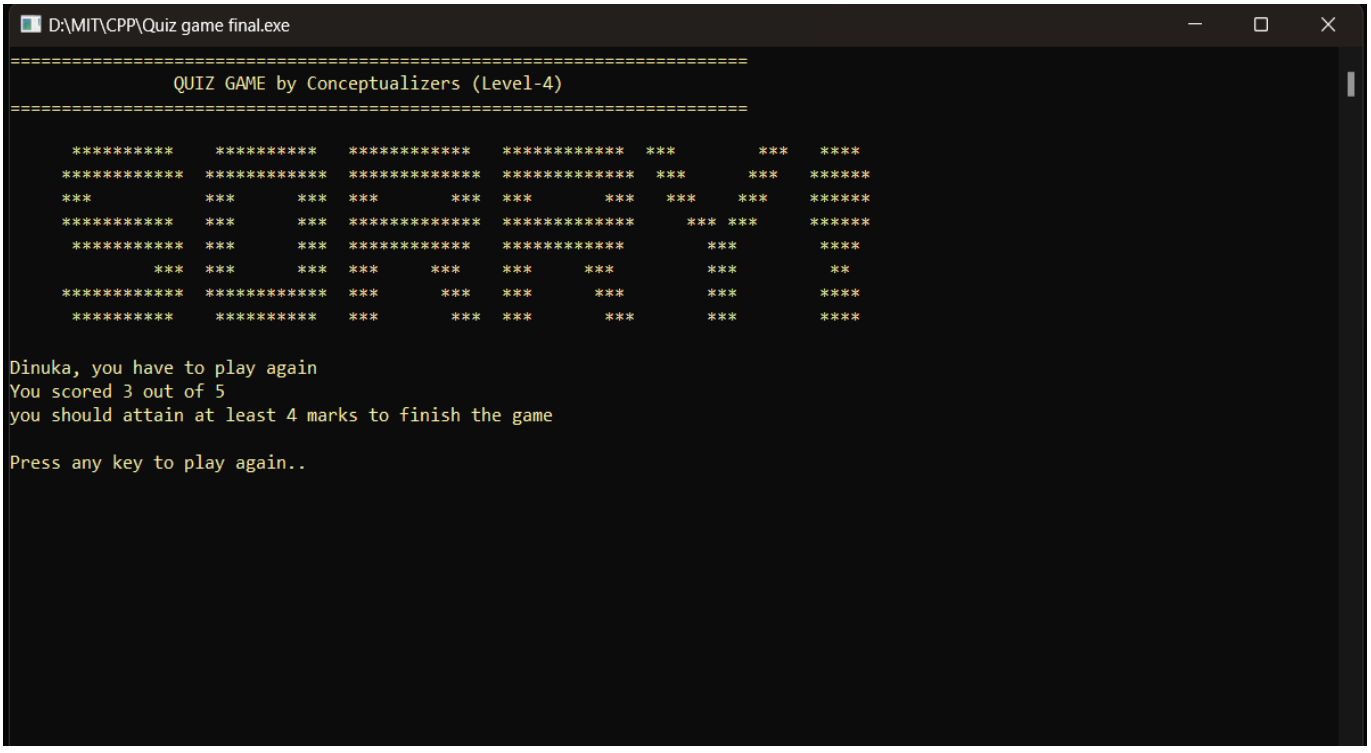




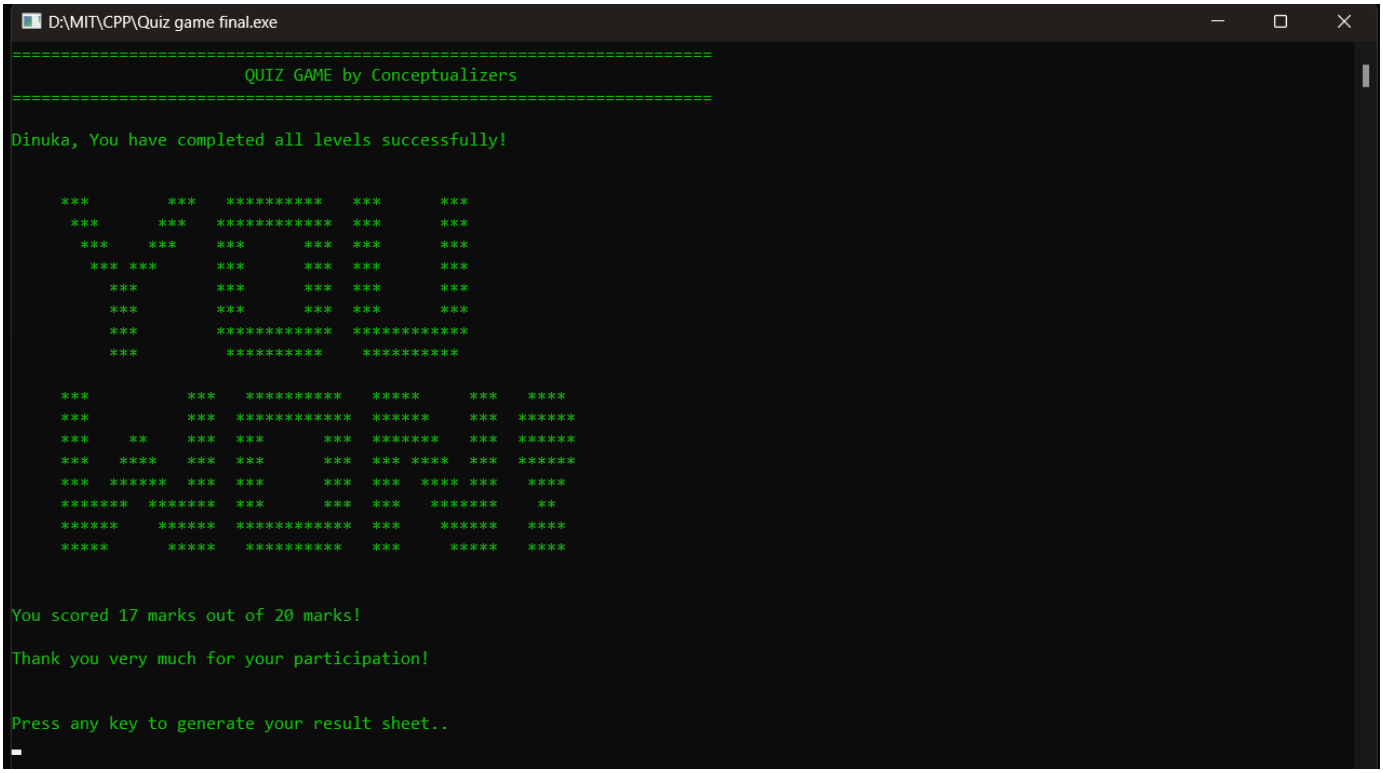


In every level, user interface looks like this and after completed each level successfully user can see some words like this, and it provides some motivation to proceed for the next level.

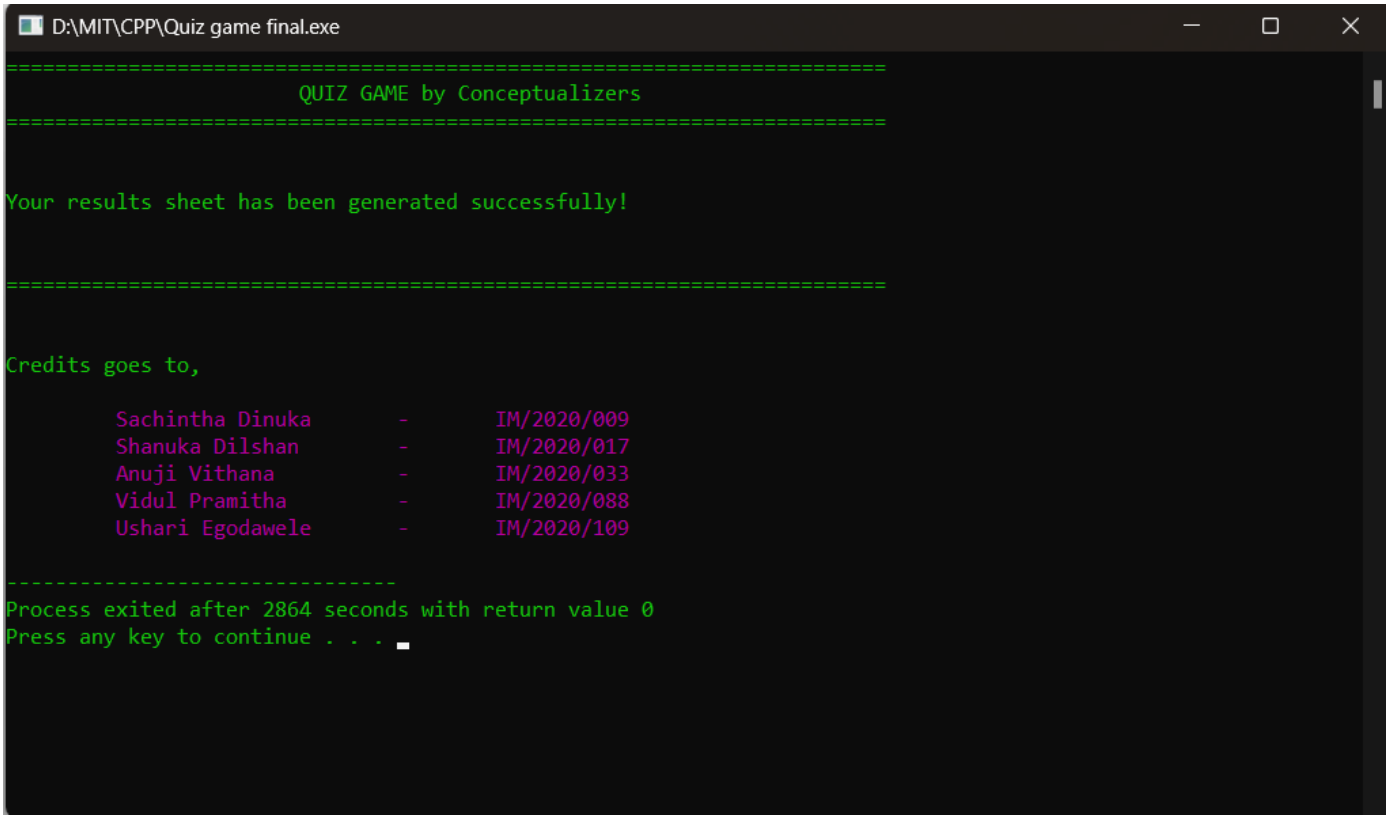
If the player failed to achieve the goal in each level the user interface looks like this.



If the player successfully completes the fourth level the user interface looks like this.



After pressing an any button, the system will create the player's result sheet and shows credits in the game. With that the game ends.



The Result sheet will be created like this as we mentioned earlier.

*Result_sheet.txt - Notepad

File Edit View

Dinuka, this is your result sheet

	Q1	Q2	Q3	Q4	Q5
Level-1	C	C	W	C	C
Level-2	C	C	C	C	C
Level-3	C	C	C	W	C
Level-4	C	W	C	C	C

You scored 17 marks out of 20 marks!

Good luck!

Ln 1, Col 1 100% Windows (CRLF) UTF-8

iQuiz game answers

Levels	Questions	Answers
I	1	c
	2	b
	3	a
	4	b
	5	c
II	1	d
	2	a
	3	c
	4	d
	5	a
III	1	b
	2	a
	3	c
	4	c
	5	a
IV	1	d
	2	d
	3	c
	4	a
	5	b

The learning outcomes that we used from the help of course module INTE 11223

- Arrays
- Pointers
- File handling methods
- Functions

Group Members

Team Conceptualizers

- Sachintha Dinuka - IM/2020/009
- Shanuka Dilshan - IM/2020/017
- Anuji Vithana - IM/2020/033
- Vidul Pramitha - IM/2020/088
- Ushari Egodawela - IM/2020/109