GAME:

GROUP MEMBERS:

MUHAMMAD ANAS HASSAN (20K-1726)

ABDUL BASIT (20K-0333)

MUHAMMAD WARZAN (20K-1649)

➢ INTRODUCTION (AIM OR MOTIVATION):

Although C language is not much in use nowadays like other programming languages but still it plays an important role in building programming skills among the beginners. Usually C++, Java, Python and PHP are utilized to design softwares, projects and a variety of applications. C language can be utilized too far such purposes to the some extent. Our youth generally enjoys gaming and enjoyable applications.

Therefore our aim and motivation was to design gaming project in C language.

➢ BACKGROUND (RESEARCH AND PROJECT SELECTION):

It was difficult for us as beginners to design gaming project in C. We also did wide research on Internet and gave a detailed study to C-console games and project to pick the clue and idea to design. After the deep analysis and research, we thought to build-up a game which consists of three sub-games.

➢ PROJECT SPECIFICATION AND PROBLEM ANALYSIS :

Our C gaming project has three sub-games:
1) Letter Game
2) Luck Game
3) Quiz Game

SHORT DESCRIPTION ABOUT GAMES:

- LETTER GAME:
  In this game, there will be random falling alphabets stored in a text file. The user will have to press the key of the corresponding falling letter before reaching the line otherwise the game will be over.
- LUCK GAME:
  In this game, there will be user decided even number of boxes containing the hidden cash. The two players will open the boxes one by one and getting money in that. One who will get greater amount will be declared winner.

- QUIZ GAME:

  In this game, there will be four main sections namely:
  1) Mathematics
  2) Physics
  3) Chemistry
  4) General Knowledge

  Each section consists of maximum five questions related to the subject. User has to answer the asked questions by entering the correct answer number. In the end, the total number of correct answers will be displayed along with the remarks and the answer sheet.

  We faced many problems in building-up these games but resolved them by the thoroughly study of Youtube tutorials and research on internet.

➢ **SOLUTION DESIGN (PROJECT DETAIL, FUNCTIONALITY AND FEATURES):**

- LETTER GAME:

  Learn Keyboarding with this letter game! The goal of this game is to press the letters that falling before they reach the line. The faster and more accurately you type, the higher your score! The game is showing a different letter that the user must type to prevent Game Over.

  We design this game for the user to get attracted by this game and also helps in Typing Skills.

  In the letter game function, we are fetching alphabets from a file(.txt) in reading mode. If the file doesn't exist an error will be print. We are using the gotoxy function to select our desired coordinates in the console. We using for loop and while loop to print alphabets in Y direction. We also use the usleep function that suspends the current process for the number of microseconds passed to it. It can be used for delaying a job. We also use the Kbhit function to take input without

any break. If the line equal to the alphabet line the Game is Over. You can see your score and total time play.

- ### LUCK GAME:
  This whole game consists of two main functions
     1) Void luckgame()
     2) Void luckbase(parameters)

  In this first function, I have done the starting part of the code which includes the front screen design. Instructions of the game and generated user decided even number of boxes by using calloc() function and also generated cash in the boxes by random function.

  In the second function, I passed the address of the boxes , array of structures containing names of the players and some others parameters.

  There is an outer while loop which brings the turn of the players one by one and two inner for loops and a sub while loops.

  In these loops, the coding for each player is mentioned and the sub while loops works only when the players choose the unavailable or the already opened boxes.

  In the end, when the outer while loop ends, the winner of the game id displayed by checking the total of each player. In the backend two files of the players are produced which contains the record of each turn of each players.

- ### QUIZ GAME:

  In the beginning of the game, the user will have to register in order to play the game. Some instructions will also be given to the user before starting the quiz game.
  This game consists of four sections namely:
     1) Mathematics
     2) Physics

3) Chemistry
4) General Knowledge

For these four sections there are four user defined functions, which have both the return type and one parameters and these parameters are used in these functions by which the user input the correct answer to the question by entering the right option. These functions are:

1) int maths_library(char w);
2) int physics_library(char x);
3) int chemistry_library(char y);
4) int generalknowledge_library(char z);

We make one variable of data type static int in each of these functions which is responsible to count the score in the desired section from a total of five questions and initialize it with zero. One question carried two marks so that the total marks are 40. Each section contain five questions so the total number of questions are 20. If the user enter the right answer to the question we incremented that specific variable in the specific section by two because each question is of two marks.

We also make a variable named score in the main function which add all the total number of correct answers from all the four sections and displayed it on the console screen from a total marks of 40.

In the end, some remarks will be given to the user depending upon the total number of correct answers/score. In the end, an answer sheet of all the questions will be displayed on console. The main goal of this game is to check your Knowledge.

➢ IMPLEMENTATION AND TESTING :

The code is fully error free. While coding, we performed testing of our code several times. We have tried our best to add the above mentioned features in our project by the coordination and efforts of our group members.

- **PROJECT BREAKDOWN STRUCTURE (WORKLOAD DISTRIBUTION WITH TIMELINE):**

  We all worked equally in this project together but the workload is distributed among the group members as:

  1) <u>MUHAMMAD ANAS HASSAN (20K-1726):</u>

     Letter Game (one month)

  2) <u>ABDUL BASIT (20K-0333):</u>

     Luck Game (one month)

  3) <u>MUHAMMAD WARZAN (20K-1649):</u>

     Quiz Game (one month)

- **RESULTS AND CONCLUSION (SUMMARY AND DISCUSSION):**

  In the end, we merged the all three sub games into a single game. The names of all the three games will be displayed in the main menu. And the user will decide which game he/she has to be played. We also provided the graphical screen rather than the black console screen for better look and presentation. We have described the complete features of our project. Hope you will like.

  >>>>>>>>>>>>>>>>>   THANKING YOU <<<<<<<<<<<<<<