# PROBLEM-SOLVING USING C AND C++ PROJECT

# "BEST OPTION PREDICTION IN A CARD GAME"


**Submitted By:**

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**Submitted To:**

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1. **Title**

   The project is titled “Best Option Prediction in a Card Game.”

2. **Introduction**

   The program in the project is designed to give a prediction for the best option for a particular player in a traditional game of four cards. It uses user profiling and past moves to predict the best move for any particular player in the game.

3. **Detailed Design**

   The program will use class templates and inherited classes to save the data of the users and their profiles. Further, the processing will be done using an algorithm after sorting all the previous data of other games stored in the form of files. The game consists of 16 cards of 4 types with 4 cards each and is played between 4 players. The prediction is done using a weightage system that assigns a probability value to all the four options of the cards that a user can pass to the adjacent user on the next turn.

   The weights for all the four cards are calculated based on the previous cards exchanged to the player. Each user carries four cards at a particular time and has to pass a single card to the player right to him. If a person gets all the four cards of the same type, then he/she wins the game.

   The data of the previous moves are read from the files and then it is sorted using the appropriate sorting algorithms. After this, the profile data of the player who passed the card and the data of the player who will receive the card is used to calculate the best possible move for the required player.

4. **Hardware and Software Requirements**

   We will write the code of the project in C++.

   So, the user requires a standard PC that will be able to run the Operating System to run the program.

   Also, CodeBlocks compiler will be required to be installed on the machines.

   Preferably, any PC with the following specifications or higher will be appropriate:

   **RAM:** As required by OS and CodeBlocks.

   **Disk Space:** As required by OS and CodeBlocks.

   **Processor:** Intel Celeron processor equivalent or higher will be sufficient