THE CHECKER GAME

### Project Proposal

## https://upload.wikimedia.org/wikipedia/en/1/1f/Bahria_Uni.png

## Submitted to

Sir Naeem-UR- Rehman

## Submitted by

Rabia Bashir

01-133132-144

BSE-6B

**Department of Software Engineering,**

Bahria University, Islamabad.

**Checker Game**

**Purpose**

The main purpose to choose this Game is to think in various direction or dimensions and make different strategies according to different situations effectively and efficiently in short period of time. It increases the Capability of a person to think and make decisions and strategies in short interval of time to win the Game.

# **Tools/Technology**

* Microsoft Visual Studio 2013(Professional)
* CS Photoshop

1. **Language Used**

* C# language

**3. C# Concepts Used**

* Forms
* Buttons
* Labels
* Panels
* Images
* Picture Box
* Event Handler
* Sound Player

# **4. Milestones**

This project will take 7- 8 weeks to complete.

# **5. Introduction**

Each player begins the game with 12 pieces that are placed in the 3 rows closest to him or her. The main aim of this game is to capture or remove all of your opponent's checkers Basic movement is to move a checker one space diagonally forward and for King to move on forward diagonal as well as backward diagonal

# **Objective**

The objective of this project is to create Checker game in which player can make move diagonally and capture all of opponent's pieces so that your opponent has no possible available moves or checks.

# **Project Main Flow**

**Human Vs Human**

Algorithm is made according to the Rules of Checker game.as described below

# **Problem Description**

1. **Setting the Object of Checkers**

The checkerboard has 64 alternating light(White) and dark(Black) squares. The game is played on the dark squares.

* Game board(8\*8)
* 24 discs (12 of 2 colors)
* Each player has 12 color(red, white) pieces

**1. Simple Movement**

**2. Jumping**

**3. Crowning**

* **Movement**

In simple movement the main aim is to move a simple checker or piece one space diagonally forward(left or right) if any diagonal is present .

* **Jumping**

In jumping ,if your opponent’s checkers or piece is on a forward diagonal(left, right) next to one of your checkers, and the next most space is empty, then your checker must jump over the opponent’s checker and remove opponents checker from the board and place itself in the next most available empty space and getting the point for it.

. Both players kings (red King and blue King) are allowed to make multiple jumps in both direction (Forward and Backward)

* **Crowning**

When one of your checkers or piece reaches to the last row of your opponent, it is crowned and becomes a “King”. Now both players Kings(Blue King and Red King) can move forward and Backward as well as Jump forward and Backward.

1. Games Rules
2. Checkers is played between two players. Each player starts the game with 12 colored discs. (One set of pieces is blue and the other is red.)
3. The board consists of 64 squares, alternating between 32 dark (Black) and 32 light squares (White).
4. Game can be played on alternative black squares only.
5. Each player placed his or her checkers or pieces on the 12 dark squares closest to him or her and alternate the turn one after the other.
6. Blue moves first and afterward Players then alternate the moves.
7. Simple Moves are allowed only on the dark squares, so pieces always move forward diagonally (i.e Blue move left down diagonally and right down diagonally whereas Red move left up diagonally and right up diagonally). Single pieces are always limited to forward moves (means only towards the opponent’s side).
8. When a jump is possible then the opponent pieces should be removed from the board and gaining a point against it.
9. When your piece reaches towards the opponent last row it is crowned and now your simple piece becomes a king.
10. Kings moves both diagonally forward and backward.
11. A player wins the game only when the opponent cannot make any possible move or because all of the opponent's pieces have been removed from the board and thus game come towards end showing a wining panel for the player piece.
12. Sound System for simple move as well as jump move.
13. Wining panel pop up at the end of wining the Game.

# Solution Application Areas

Checker is very interesting game and very fruitful for brain exercise because you can play in many ways, it will build your thinking strategy. The main target domain of this game is 10+ aged users. To explore and think useful strategies and ideas to win the Game