**OBJECT ORIENTED PROGRAMMING**

**END–SEMESTER PROJECT**

**TEAM MEMBERS:**

* Abdul Rahman Bin Saad (Leader)
* Sohaib Dogar
* Muhammad Saad Qureshi

**ABSTRACT:**

**Program Type**: Two-Dimentional Game

**SDK/Libraries**: Visual Studio 2013, SFML/OPENGL

**Programming Language**: Visual C++

**Overview**:

For our final project, we have planned to code an interesting puzzle game. The name of this game is not decided yet. It is based on the game **LEGO® MINDSTORMS® Fix Factory** created by **THE LEGO GROUP (**[**www.lego.com/en-us/mindstorms/funzone/fixthefactory/**](http://www.lego.com/en-us/mindstorms/funzone/fixthefactory/)**).** It is a two-dimentional implementation of the above mentioned 3-D game. Moreover, since this type of game is not available on PC yet so our project will be the first of its kind implemented in Visual C++.

This is a programming game. The main object is a robot which is required to be moved in a particular location after performing certain tasks. When a level is started, the user is expected to program the robot by placing the icons of certain commands in the execution list in a particular order. When the user runs the program, the robot executes the instructions by moving forward, turning, pick up, drop etc.. If the robot completes the tasks on that code then the level is completed and score is based on time taken, no. of steps, trials etc.. This game will have about 15 levels and we are going to implement most of the concepts of Object Oriented Programming.

This game is very beneficial for the cognitive training of children as it enhances their problem solving abilities and anticipation. This game is also meant to introduce the concept of programming among children as they learn to think more logically and appreciate the step by step way of problem solving. A lot of research has been done in this regard that through proper problem solving and cognitive training, we can actually enhance our brain’s performance.

We are going to create the program using libraries like SFML or OPENGL on Visual Studio 2013. This is what we have to disclose so far because it might be possible that we end up doing something different if this is not feasible or maybe we might submit one more project.