**Introduction**

This project will involve setting up an environment that allows machine-versus-machine competitions in the board game Hex. Creating interfaces for board Games is the most disturbing task in game development, and many software developers find it difficult to draw boards using the existing Board Game Designing studio software for example CardWaden.

Programmers use IDE (Integrated Development Environment) such as Python, Java, to develop codes that control, game interfaces. But if we come up with an environment comprising of board game design, reusable interface, and the software itself that developers can edit basing on how they want their games to function and behave.

**Background**

The game of Hex was first invented in 1942 by Piet Hein, a Danish scientist, mathematician, writer, and poet. In 1948, John Nash at Princeton re-discovered the game, which became popular among the math graduate students at Princeton. They called Hex either “Nash” or “John”, though the latter referred to the hexagonal bathroom tiles that they played the game on. In 1952, Parker Brothers, Inc. popularized the game as “Hex. The board game allows two players to play on a hexagonal grid, theoretically of any size and several possible shapes, though the typical size is 11 X11. The players alternate turns with the goal of forming an unbroken chain of tiles of his own colour of course linking his two regions.

Currently according to hexagon.org, Hexagon has increasingly been interpreted for computer play whether online or simply on the desktop that strict adherence to board styles, colour schemes and number of players has fluctuated greatly. Two options are available when playing on the computer: one can either play with the computer program or connect to the internet and play with someone elsewhere in the world.

**Problem statement**

The project will tackle how to set up an environment that allows for machine verses machine competitions in the board game. This will help programmers overcome time wastage on developing the code that can control the interface, since they sit and make prototypes of the board games, they also test different output of these prototype at all stages of the game. Developing a machine verses a machine competition board game, with a reusable interface will ease their work .The interface is to be made easy to use for game engines.