## **Software Methods and Tools**

Assignment-2, Spring-2017



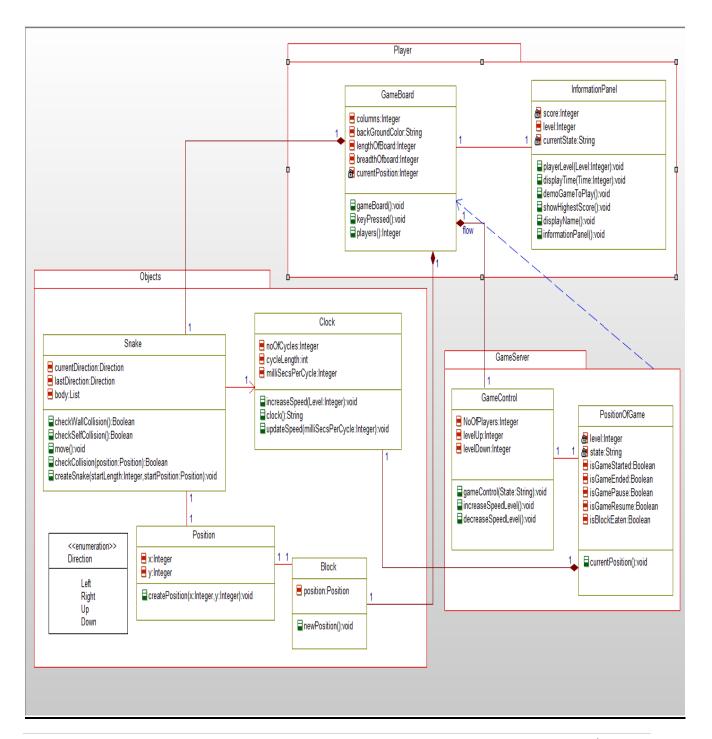
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**Question:** Create a UML class diagram that captures the main classes and their relationships of the Snake game.



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The main aim of this assignment is to give an idea of the class diagram for a snake game. Description for each class is explained below.

**GameBoard:** This class represent the UI of the game. It has the dimensions and color and players list.

<u>InformationPanel</u>: This class represent the state of the game, level, score. It displays the time for the game. It displays a demo game for new users. This class also represent the name of user, their highest score.

<u>Snake</u>: This class create a position for a snake. It checks if the collision is a wall collision or self collision. It also controls the movement of the snake. It takes care of the direction of the snake too.

**<u>Block</u>**: This is the food for the snake. This has a new position everytime the snake had eaten the previous one.

<u>Clock</u>: This class is used to maintain the time of the game. It updates the clock every second automatically. After few levels, it also increases the speed gradually.

**<u>Position</u>**: This class helps in the creation of the snake and block.

<u>GameControl</u>: This class is used to control the total game. It has control of the number of players, levels of the game, speed levels.

<u>PositionOfGame</u>: This class represents the current position, the state of the game whether it is started, ended, or if it is in resume or pause state.