Milestones

Goal #1:

Display a Background bitmap image.

Goal #2:

Display a Paddle on the left side of the screen using a bitmap or brush.

Goal #3:

Display a Paddle on the right side of the screen using a bitmap or brush.

Goal #4:

Display a Ball on the screen using a bitmap or brush.

Goal #5:

Allow the user to control the Left and Right Paddles using keyboard input. This goal should be accomplished within the **Game::GetInput()** method.

Goal #6:

Implement a simple physics system that will allow the Ball to travel across the screen. To accomplish this, give the Ball a position and a velocity. The position will store the location of the Ball on the screen. The velocity maintains the Ball's speed and direction. Movement is now possible by adding the Ball's velocity to the Ball's position. This goal should be accomplished within the **Game::Simulate()** method.

Goal #7:

Display two scores on the screen. It is up to you to decide what will increase or decrease the scores.

Goal #8:

Implement Ball to Wall collision detection and response. If any side of the Ball goes off-screen, program the Ball to move the opposite direction. It may also be necessary to reposition the Ball if it gets stuck within a wall. This goal should be accomplished within the **Game::Simulate()** method.

Goal #9:

Implement Paddle to Wall collision detection and response. If any side of the Paddle goes off-screen, stop the Paddle from going any further. It may also be necessary to reposition the Paddle if it gets stuck within a wall. This goal should be accomplished within the **Game::Simulate()** method.

Goal #10:

Implement Ball to Paddle collision detection and response. The easiest way to do this is to check if the bounding box of the Ball is intersecting with the bounding box of the Paddle. If the two objects are intersecting, program the Ball to move in the opposite direction. It may also be necessary to reposition the Ball if it gets stuck within the Paddle. This goal should be accomplished within the **Game::Simulate()** method.

Note:

When you have completed the goals above, please continue working on the Pong project which is **due at the beginning of class on Day 8**.