COMP222 Assignment1 Checklist

Step1: model the environment 20%	
Model the playground	√
Model the paddle	√
Model the green balls	√
Model the red game ball	√
Shade of the game ball	√
Textures of all the balls	√
Creative lighting	√

Step 2: Physics 35%	
Step 2.1: Ball motion 5%	
Game ball starts moving from the top of the paddle	√
Game ball can move in any direction	√
Game ball does not have to bounce off	√
Step 2.2: Collision with the boundary and the paddle 10%	
Model how a ball bounces off the top and sides of the table and off the paddle.	√
Step 2.3: Collision with the green balls 10%	
Model the collision between the game ball and stationary balls	√
Step 2.4: Removal of physics entities 10%	
Remove the stationary ball after collision with the game ball	√
Remove the game ball if it gets off the field and restart the game	√

Step 3: Keyboard (and/or mouse) interaction 10%	
Introduce a way to move the paddle left and right.	√

Step 4: Gameplay 15%	
Add a visible point count	√
Add game levels	√
The player progresses to the next level when the field is cleared	√
Add at least two levels	√
Previous level should be clear when the player progresses to the higher level	√

Extra 20%	
Textures of the playing field, background sky, stationary balls and game ball	√
Sound effects	√
Stationary balls forming interesting shapes	√
More realistic physics	√
Levels of difficulty	√
Pause and restart the game	√

Explanation of the extra features:

1. Textures:

   I download several 3D Blender resources from google. The stationary balls are billiard ball with different colors. The game ball is a football. The playing field is a billiards table. The background is the wooded board. The paddle will change its color every time the game ball collides with the it.

2. Sound effects:

   The game has four different sound effects. The first one is the collision sound when the game ball hits the table or the paddle. The second one is the collision sound when the game ball bounces off the stationary balls. The third one is the applause audio when the user finishes all three levels of the game. The last one is the background music of the game. It starts playing when the game starts.

3. Stationary balls forming interesting shapes

   The stationary balls form a triangle at the first level. At the second level they form a square. At the last level, they form a pentagon.

4. More realistic physics

   The game ball has shadow with it when moving inside the playing field. This makes the physics more realistic.

5. Levels of difficulty

   At the first level, there are only three stationary balls and the game ball moves slowly. This can help the user get used to the game. When the user proceeds to the second level, there are one more stationary ball and the game ball is accelerated. The last level is the most difficult level. There are 5 stationary balls and the game ball will move very fast. After finishing all three levels, the user will win and the winning interface will be displayed.

6. Pause and restart the game

   Once the user presses KEY A, the game ball will be paused. In order to restart the game, the user has to press KEY D.

The three different levels of the game

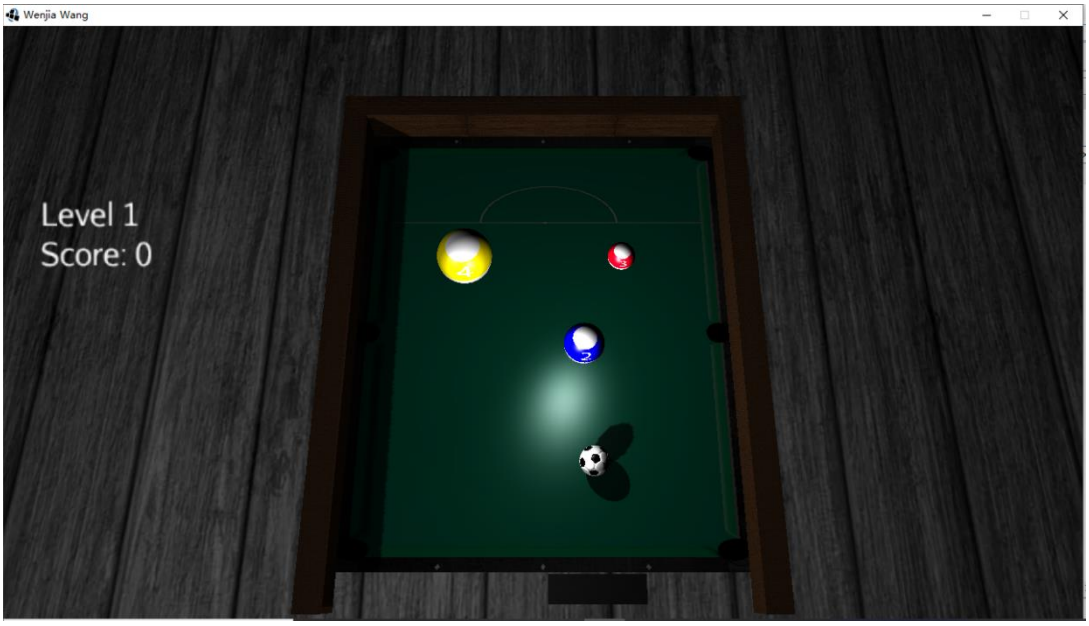

Figure 1

Figure 2

Figure 3

The three User interface of the game

Figure 4

Figure 5

Figure 6