3.2 Game content

3.2.1 Structural Diagram
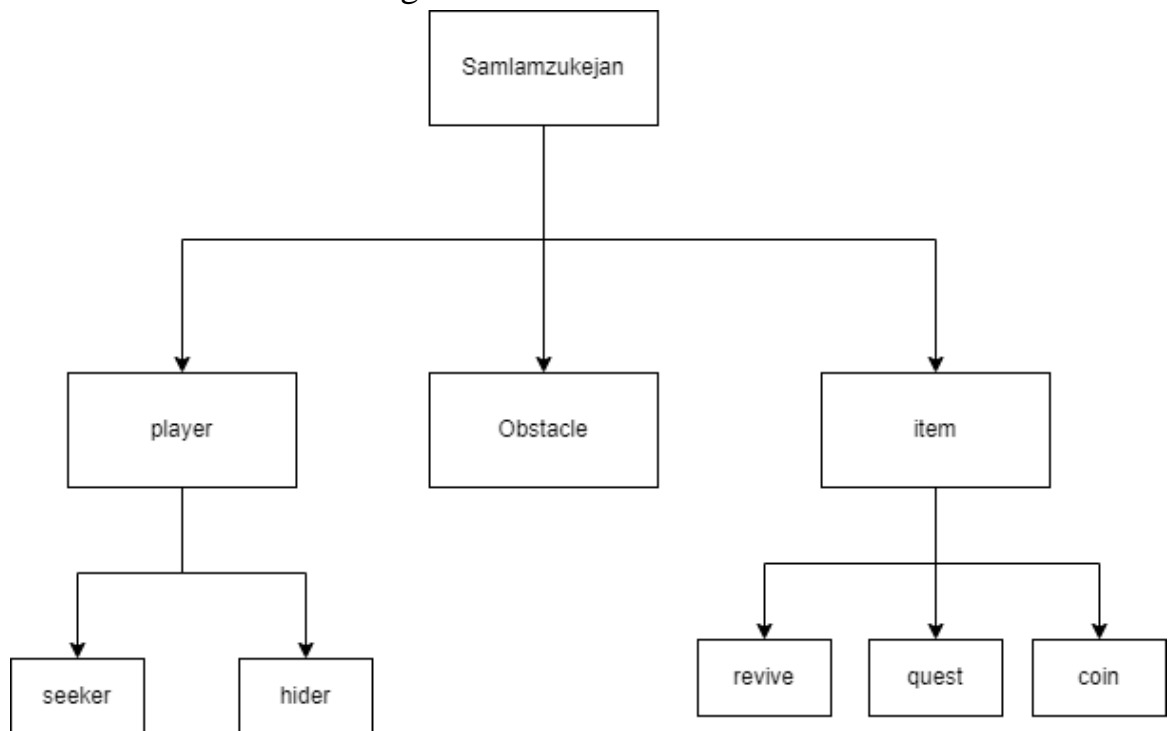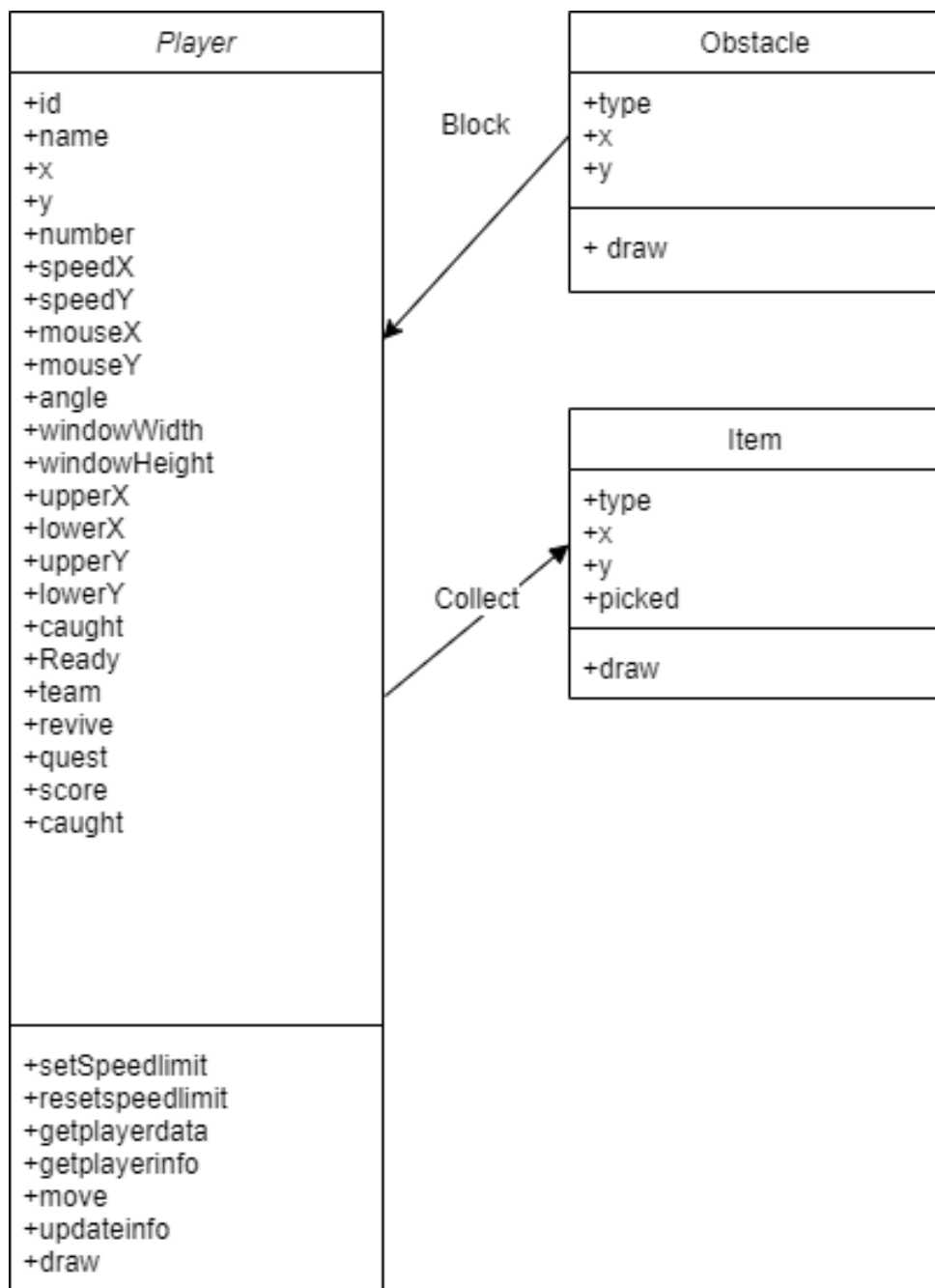

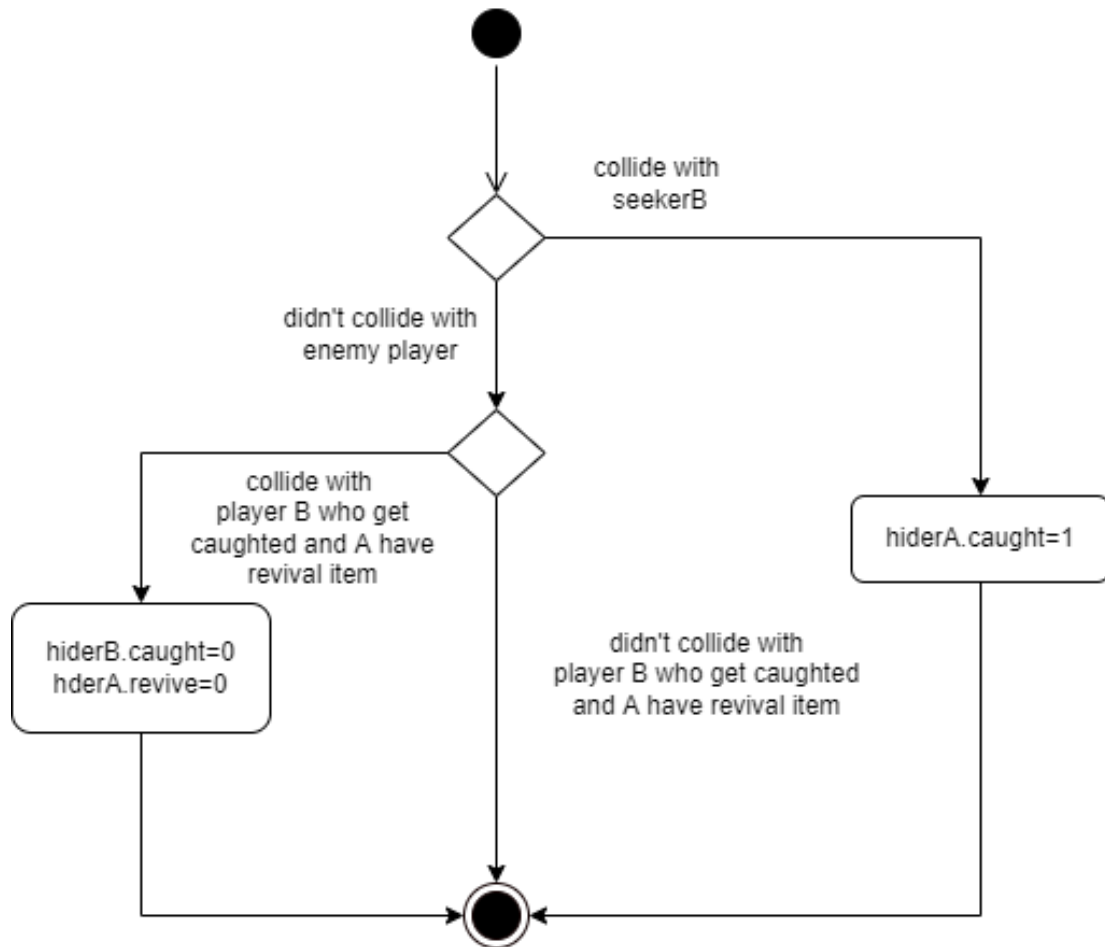### 3.2.2 UMLs

3.2.2.1 Use-Case Diagram

Samlamzukejan

move

collect item

meet obstacle

catch hider

rescue teammate

hider

seeker

3.2.2.2 Class Diagram

Player

+id
+name
+x
+y
+number
+speedX
+speedY
+mouseX
+mouseY
+angle
+windowWidth
+windowHeight
+upperX
+lowerX
+upperY
+lowerY
+caught
+Ready
+team
+revive
+quest
+score
+caught

+setSpeedlimit
+resetspeedlimit
+getplayerdata
+getplayerinfo
+move
+updateinfo
+draw

Obstacle

+type
+x
+y

+ draw

Item

+type
+x
+y
+picked

+draw

Block

Collect

3.2.2.3 Activity Diagram

collide with
seekerB

didn't collide with
enemy player

collide with
player B who get
caughted and A have
revival item

hiderB.caught=0
hderA.revive=0

didn't collide with
player B who get caughted
and A have revival item

hiderA.caught=1

Player A collide with Player B

3.2.3 Functionality

The game has 3 elements: player, item, and obstacle. Player in different team represent hider and seeker. Hider can collect objective item and revival item. Seeker can catch other hider by colliding with them. All players cannot pass through obstacle.

3.2.4 Procedures and Functions

| Function	Description
checkplayercollide	See if the players can catch or release players
checkplayercollision	Check if the players collide with other players Check whether player collide with the player
collisionwallhandle	Stopping player's motion when they collide with wall
sendcaughttomiddle	Send player who get caught to the middle of the map(x=0,y=0)
checkeveryoneready	Check all players are ready to start the game or not
draw	Render object with preferred colour
checkitemcollide	check if the players collide with items
input	sending input (WASD and mouse movement) unless you are caught
checkobstaclecollision	check if the players collide with obstacle
checkcollide	check if there's any collision of player and wall/object
keyPressed	Create movement of the player when pressing WASD
ReadyForGame	Get the player ready/unready for game, it triggers by pressing ready button

5.3 Game
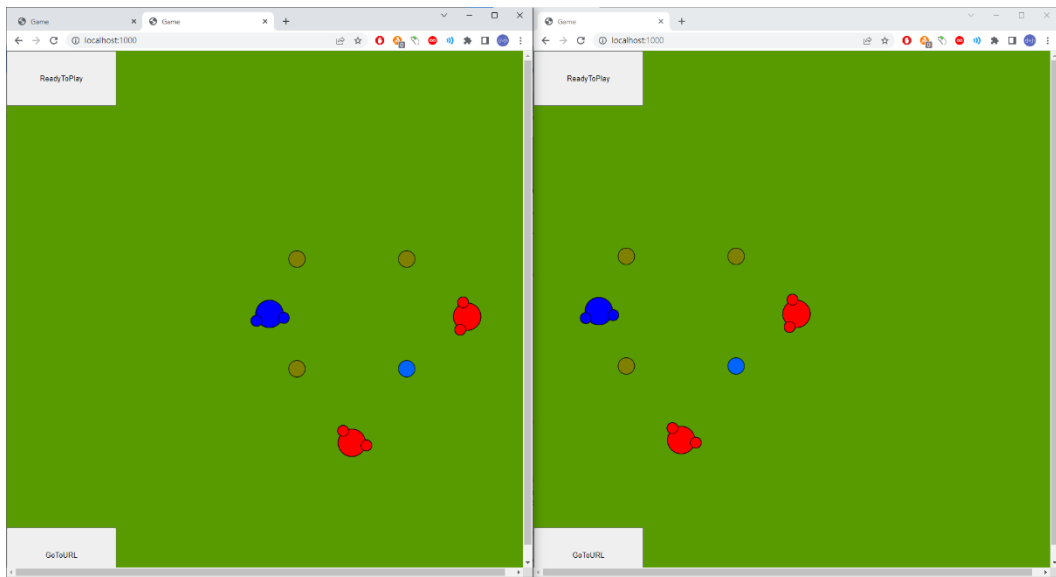
There is a "ReadyToPlay" button, once pressed, the player's status of ready will switch from 0 to 1, or from 1 to 0. Once all players' status of ready are 1, the game will start. There's also a "GoToURL" button, once pressed, the user will be redirected to login page

Players can see each other, but their own character is always at centre of the screen. Player in blue is seeker, and player in red is hider.
There are obstacles in the game(white circle), players cannot pass through them.

5.3.1 Border line
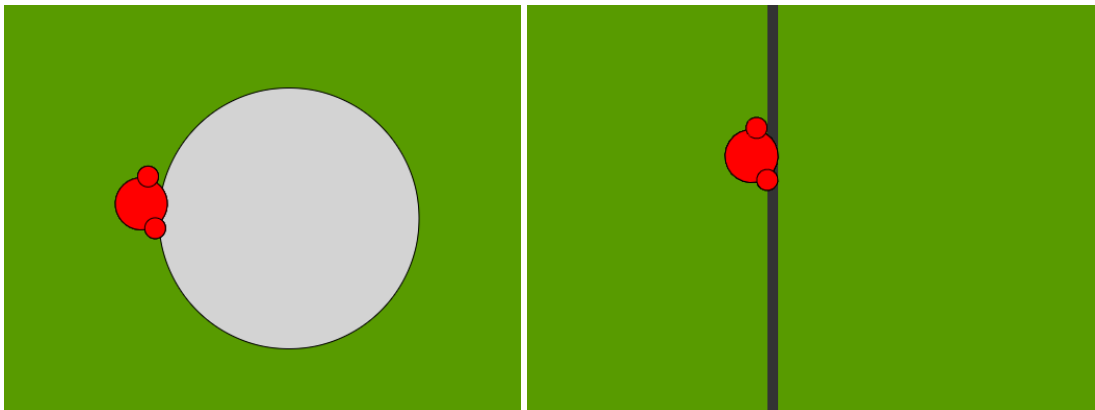
There are also borders in the game, players cannot pass through border line (black line)

5.3.2 Revival item

Hiders can pick them items(small circles) by colliding with them, and only hiders can pick up items. Seeker catches hiders by colliding with them. Once a player is caught, the player will be sent to middle of the game (x = 0, y = 0) as shown in picture. The caught player will not be able to move unless rescued by other hider who has picked up revival item (small blue circle). Once all hiders are caught, the game is over and seeker wins. Hiders can pick them items by colliding with them. Only hiders can pick up items.
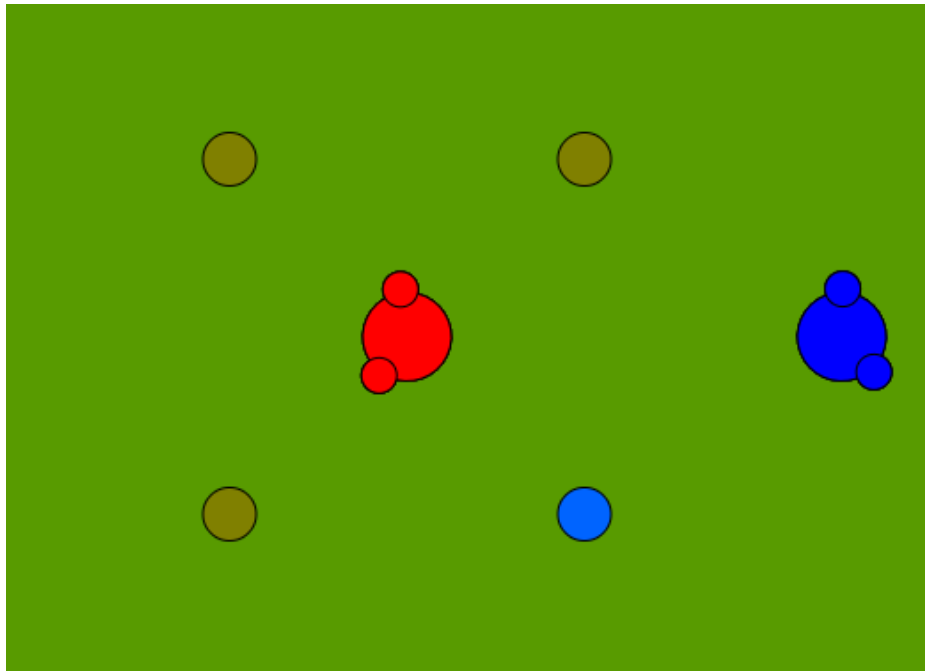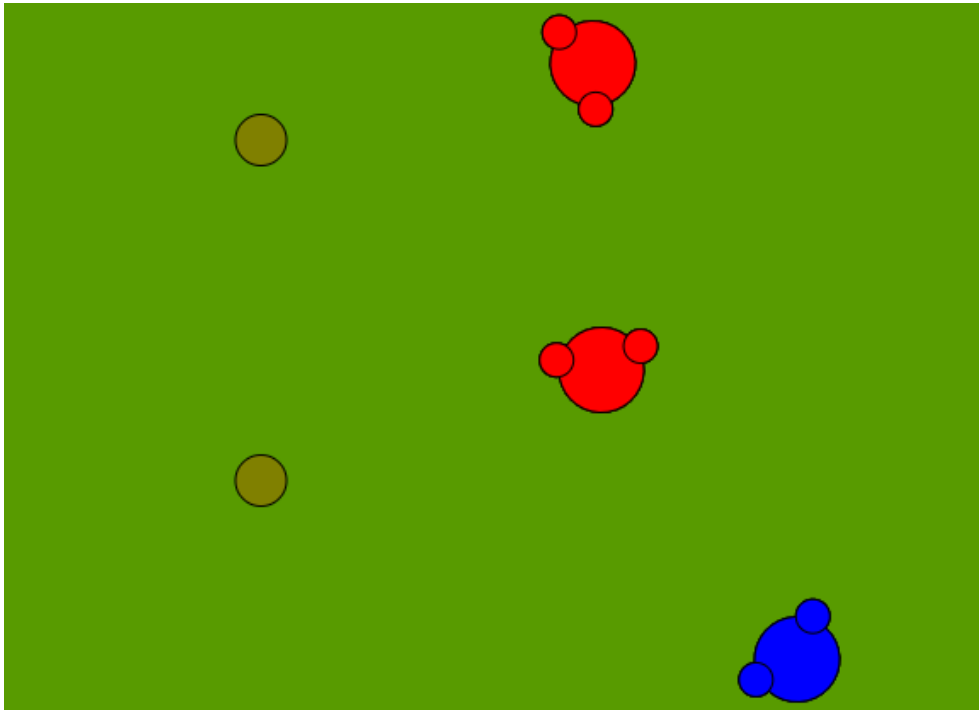

Hiders can pick up revival item and then collide with caught player. Then the caught player will be able to move again.
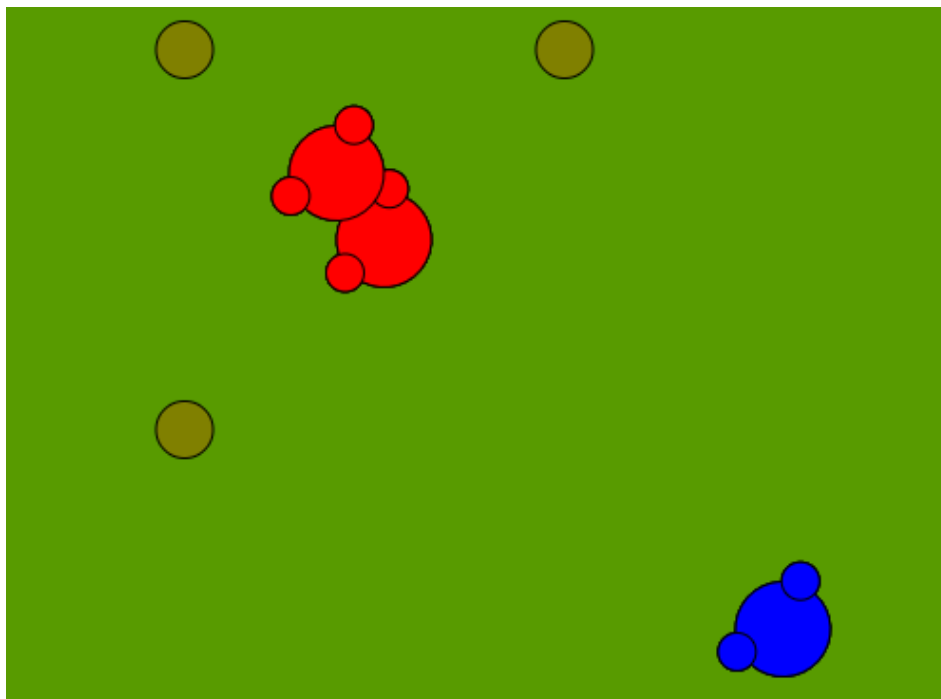
5.3.3 Quest items

Hiders can pick up quest items (small brown circles). Once hiders collect all three of them, the game is over and hiders win.


5.3.4 Coins

There are also coins (small yellow circle) in the game. There can be a random number of coins with a maximum of 100 coins in one game. Only Hiders can pick them up. After picking them up, the score of player increases by one and the colour of the character changes (Maximum of 10 coins, the colour after picking up 10 coins and the colour after picking up 20 coins have no difference). This serves no actual use in terms of game machines but it makes the player looks cooler.
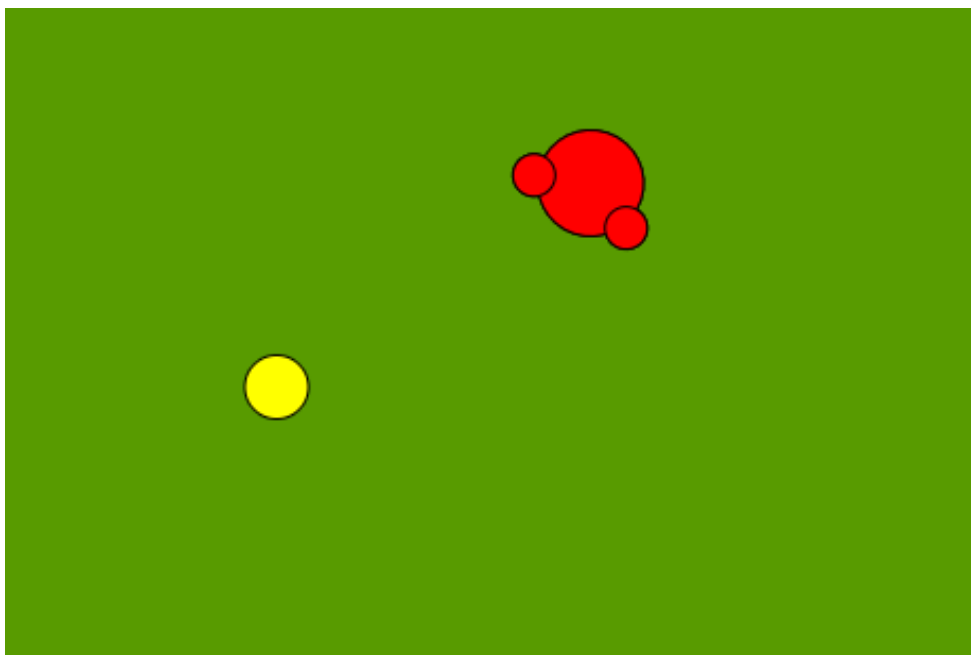
Hider after picking up 5 coins (the one on the right):
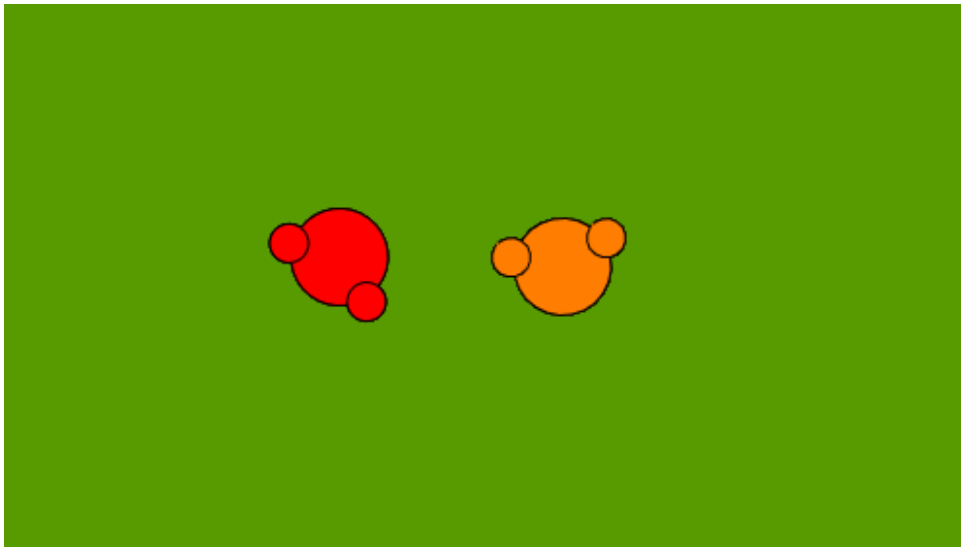
Hider after picking up 10 coins (the one on the right):
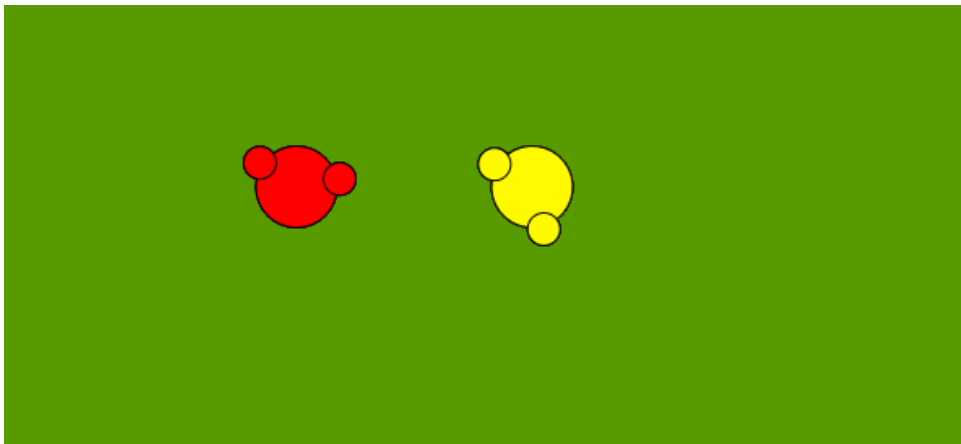
Players (both hiders and seeker) can also cheat by pressing "c" button on the keyboard to instantly teleport to middle of the game (x = 0,y = 0)