Lab Sheet Phaser Physics Week09

Create physics for the “PacRio” game. In the game, the player has to collect all the mushrooms within a period of time while bouncing on a movable platform. The score is based on how much time the player spent to collect the mushrooms. Notes that currently the character is controllable while the platform is dragable. Modify it so the character can only bounce while the platform is control.

For lab this week, you need to:

Task 1: Create a physics where the character can bounce over the platform

- Start physics arcade

```
game.physics.startSystem(Phaser.Physics.ARCADE)
```

- Assign physics to elements (bot and dragablePlatform)

```
game.physics.enable( [ bot,dragablePlatform ], Phaser.Physics.ARCADE);
```

- Set dragablePlatform to static so it is not affected by gravity

```
dragablePlatform.body.immovable = true;
```

- Make the game world bounds bounce-able

```
bot.body.collideWorldBounds = true;
```

- Sets the image bounce energy for the horizontal and vertical vectors (as an x,y point). "1" is 100% energy return

```
bot.body.bounce.setTo(1, 1);
```

- Refine physics so the character bounce energy depends on the distance between the platform and the character

Task 2: In default, the character has to fall according to gravity

```
bot.body.gravity.y = 200;
```

- Assign a bounce energy parameter (either x or y or both)

```
bot.body.bounce.y = 1;
bot.body.bounce.x = 1;
```

Task 3: Add physics to mushrooms and destroy mushrooms when collide

- Create a group

```
theMushroom = game.add.group();
```

- Assign body to the mushrooms in the group

```
theMushroom.enableBody = true;
```

- Assign physics Arcade to the mushrooms in the group

```
theMushroom.physicsBodyType = Phaser.Physics.ARCADE;
```

- Populate mushroom

```
for (var i = 0; i < 50; i++) {
    var c = theMushroom.create(game.world.randomX, Math.random() * 500,
'mushroom', game.rnd.integerInRange(0, 36));
    c.body.immovable = true;
}
```

Further Task: This is a simple application of arcade physics. Is it possible to implement this with other physics system?