

Hint 1 - How to Create Game Levels

- The game should support three levels as follows:
 - Level 1: things moves slowly and shows only fishing boats and other game objects.
 - Level 2: things moves faster than level 1 and shows Fishing boats, Tourist boats, and other game objects.
 - Level 3: things moves faster than level 2 and shows Fishing boats, Tourist boats, War boats, and other game objects.

Idea of having World class and Actor class:

Let me explain the concept of having a world and actor classes. You can think of a world class as a stage in a theater. The stage sets the environment where the actors will perform their roles. In a theater's stage, you set the lights, the floor, etc. Similarly, in Greenfoot, we created the RiverRaidWorld class which will work as the stage for our game actors. In the RiverRaidWorld class set the background image, show counters, add or remove actors like the fighter jet, the fuel, etc. So, the actor classes are like persons who enter the stage at specific time to perform their role then they leave the stage. Therefore, we create Actor classes like FighterJet, Fuel, Boat, Counter, etc and where we specify how each actor (i.e. object of that class) will behave when the RiverRaidWorld call it to enter the stage.

Implementing Game Levels:

The game levels can be implemented by creating different RiverRaidWorld classes like RiverRaidWorldOne, RiverRaidWorldTwo, RiverRaidWorldThree. Then, in RiverRaidWorldTwo, we add all the objects in RiverRaidWorldOne in addition to adding TouristBoats objects. Likewise, in RiverRaidWorldThree, we add all the objects in RiverRaidWorldTwo in addition to adding WarBoats objects. To set the speed in each world subclass, you can use call Greefoot.setSpeed(**100**). Here, we use 100 to set the speed to 100% but you can reduce the number to get different speeds.

Changing from one game level to another

You can change from one level to another by creating an object of the new level and setting the world to the new object. For example to switch from level one to level two you could do the following:

- 1- In the act() method of the RiverRaidWorldOne you add an **if statement** that will check when the score becomes greater than 100, it set the world to the new level.

```
if (score==200) {  
    RiverRaidTwo level2 = new RiverRaidTwo ();  
    Greenfoot.setWorld(level1);  
}
```

- 2- Similarly, you can switch from level 2 to level 3 by using the above code but with different score in the if condition and replace the `RiverRaidTwo` with `RiverRaidThree`.

It should be noted that there are many ways to implement switching between levels and this is only one of them. Any implementation that does the required effect will be accepted.