

Exercise 1: Hardware Hacking



Your little cousin wants to play Guitar Hero but she is unable to do so because of a disability (Multiple Sclerosis) and as result she can only control games using her feet using a dance pad controller.

Assignment 1: Provide a UML diagram for your designs.

Assignment 2: Help her out by writing an adapter for her. Find a way so she can press the button on the fret and pick at the same time

```
public interface GuitarController {  
    public static enum colors {GREEN,RED,YELLOW,BLUE,ORANGE}  
    public void PressFretButton(colors button);  
    public void PressPick();  
    public void PressTremelo();  
}
```

```
public interface DanceController {  
    public static enum direction {FORWARD,LEFT,RIGHT, BACK, MIDDLE}  
    public void Step(direction dir);  
}
```

Assignment 3: Also write an adapter that would allow a player unable to use their legs (for example someone in a wheelchair) to play Dance Dance Revolution using a hand held guitar controller.