```
package rest;
import java.util.List;
import org springframework beans factory annotation Autowired;
import org.springframework.http.HttpStatus;
import org springframework web bind annotation DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org springframework web bind annotation PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;
import org.springframework.web.server.ResponseStatusException;
@RestController
public class CatController {
   @Autowired
    private CatsRepo categoryRepo;
   @GetMapping("/cats")
   public List<Category> getAll() {
        return categoryRepo.findAll();
   @GetMapping("/cats/desc/{desc}")
   public List<Category> getAllByDesc(@PathVariable("desc") String desc) {
        return categoryRepo.findByDescriptionContaining(desc);
   @GetMapping("/cats/{code}")
   public Category getCategoryByCode(
             @PathVariable("code") String code) {
        var cat = categoryRepo.findById(code);
        if (cat.isPresent())
            return cat.get();
            throw new ResponseStatusException(HttpStatus.NOT_FOUND,
                     "Category Code Not Found");
   }
   @DeleteMapping("/cats/{code}")
    public void deleteCategoryByCode(@PathVariable("code") String code) {
        var cat = categoryRepo.findById(code);
        if (cat.isPresent())
            categoryRepo.deleteById(code);
        else
            throw new ResponseStatusException(HttpStatus.NOT FOUND, "Category Code Not Found");
    }
   @PostMapping("/cats")
    public Category addCategory(@RequestBody Category category) {
            categoryRepo.save(category);
            return category;
        } catch (Exception ex) {
            throw new ResponseStatusException(HttpStatus.BAD_REQUEST, "Invalid data!");
        }
   }
   @PutMapping("/cats/{code}")
   public Category updateCategoryDesc(@PathVariable("code") String code,
```

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@RequestParam("desc") String desc) {
   if (desc.length() == 0)
        throw new ResponseStatusException(HttpStatus.BAD_REQUEST, "Invalid Description");

var cat = categoryRepo.findById(code);
   if (cat.isPresent()) {
       var category = cat.get();
       category.setDescription(desc);
       categoryRepo.save(category);
       return category;
   } else
       throw new ResponseStatusException(HttpStatus.NOT_FOUND, "Category Code Not Found");
   }
}
```

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