

# Software destruction Lab

## Objectives

### Re-Engineering

- How to explore the behaviour and structure of a system
- How to draw a diagram of the relationships between packages and between classes to help your understanding of a totally new system
- Make small changes to a system that you know nothing about, to see if it breaks or changes (this is the beginning of code exploration)

An exercise:

you'll be walking up to the code of a SmartHome system.

Smart Home Systems as you may know are IoT system that control or provide access to devices that are connected to the system. For home systems normally the UI is a small console that is beside the entrance door.

Run the program supplied at

<https://github.com/Douglas3275W21/HomeTech.git>

- 1- Draw a diagram of every class in the UI package with arrows to specific classes or packages they import.
- 2- Draw your own diagram of the simplified package relationships for the whole project.

Task 1: Submit the above as image files

Task 2: and answer the following questions:

Question 1

How many packages are directly within model?

Question 2

How many packages are directly within ui?

Question 3

How many packages are directly within tests?

#### Question 4

How many packages are directly within src? Enter your answer as a single number.

#### Question 5

How many files are directly within model?

#### Question 6

How many files are directly within appliances?

#### Question 7

In which package is the file that lets you run the whole program (with the green "play" icon)?

1. model
2. appliances
3. ui
4. tabs

#### Question 8

What's the name of the file you can run?

#### Question 9

Create and Submit to image files for

Extras for your learning:

- Go find some complex Java code on the web. Try applying the skills you've learned here to understanding the structure of that codebase!
- Try making a small change to the system; does it change anything in the program? Does it make the program behave in a way you expect it to?