University of Stirling
Computing Science and Mathematics

CSCU9P5 Software Engineering I Autumn 2018

Tutorial 2 (for week starting 1 October)

1. We have a class `Office` that has three attributes: a telephone number, a room number and a reference to the `Person` who occupies the office. It has an operation `'equals'` that checks whether two offices are the same, i.e. have the same room number. We have a class `Person` that has two attributes: a name and a job description. It has an operation `'equals'` that returns true when two `Person`s have the same name. Draw a UML class diagram for the above situation.

2. Consider constructors for classes `Office` and `Person`. What constructors could you have/would you like? What parameters will they require? *There is more than one answer.* Will some of the answers require more methods?

3. Are there any other operations that you would consider useful to add to the classes?

4. Create outline Java class definitions that correspond to your UML class diagram.

5. Has it been easier to produce Java from the UML class diagram than it would have been if you had gone directly from the problem to Java?

6. Write the method bodies for (some of) your Java classes.

7. Add an operation `'isAllocated'` to class `Office`. This operation has a `Person` parameter and returns true if that person has been allocated to that office, otherwise it returns false. Modify your UML class diagram, your outline Java class and write the method body.

8. In your model, does a `Person` know to which office they have been allocated? What change would you make to deal with that?

9. What changes would you have to make to your classes and UML class diagram if the office could have several occupants?