# Assignment 2 – REFACTOR

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#### New classes:

### 1) Urgency

Represents the urgency rating of patients.

#### 2) Analyzer

Analyzes the average wait time of patients and the room usage after simulation.

#### 3) Printer

Prints the message to console during the simulation.

#### 4) CMDHandler

Parses the command line arguments.

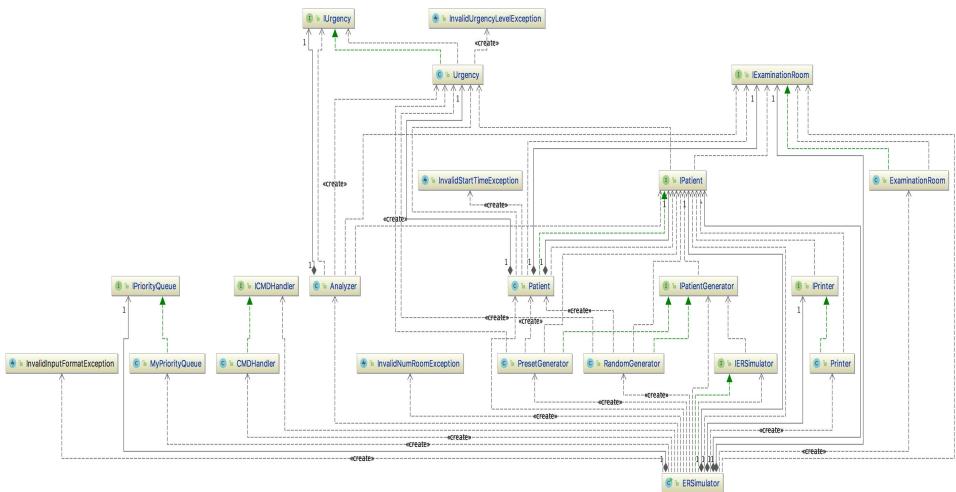
## 5) PresetGenerator and RandomGenerator (both implement IPatientGenerator)

Both are patient generators to create patients during the simulation. PresetGenerator generates patients with preset parameters; RandomGenerator generates patients with random parameters.

# Main changes:

- 1) User provides inputs through command-line arguments, instead of Scanner. Uses a CMDHandler to check the arguments format, and parses the arguments.
- 2) User selects which mode to run the simulation, preset or random. If user selects random mode, then uses a RandomGenerator to generate patients; if user selects preset mode, then uses a PresetGenerator to generate patients.
- 3) Urgency is now a class. The natural order of Urgency objects is by their urgency level (the lower the level, the higher the priority)
- 4) When the simulation has finished, analyzes the results using an Analyzer, and prints the results to console using a Printer.

Please see the UML diagram on next page. (the test classes are removed in this diagram to reduce complexity of dependencies)



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