

Modelling in Construction

Software Systems – Design – L2T3

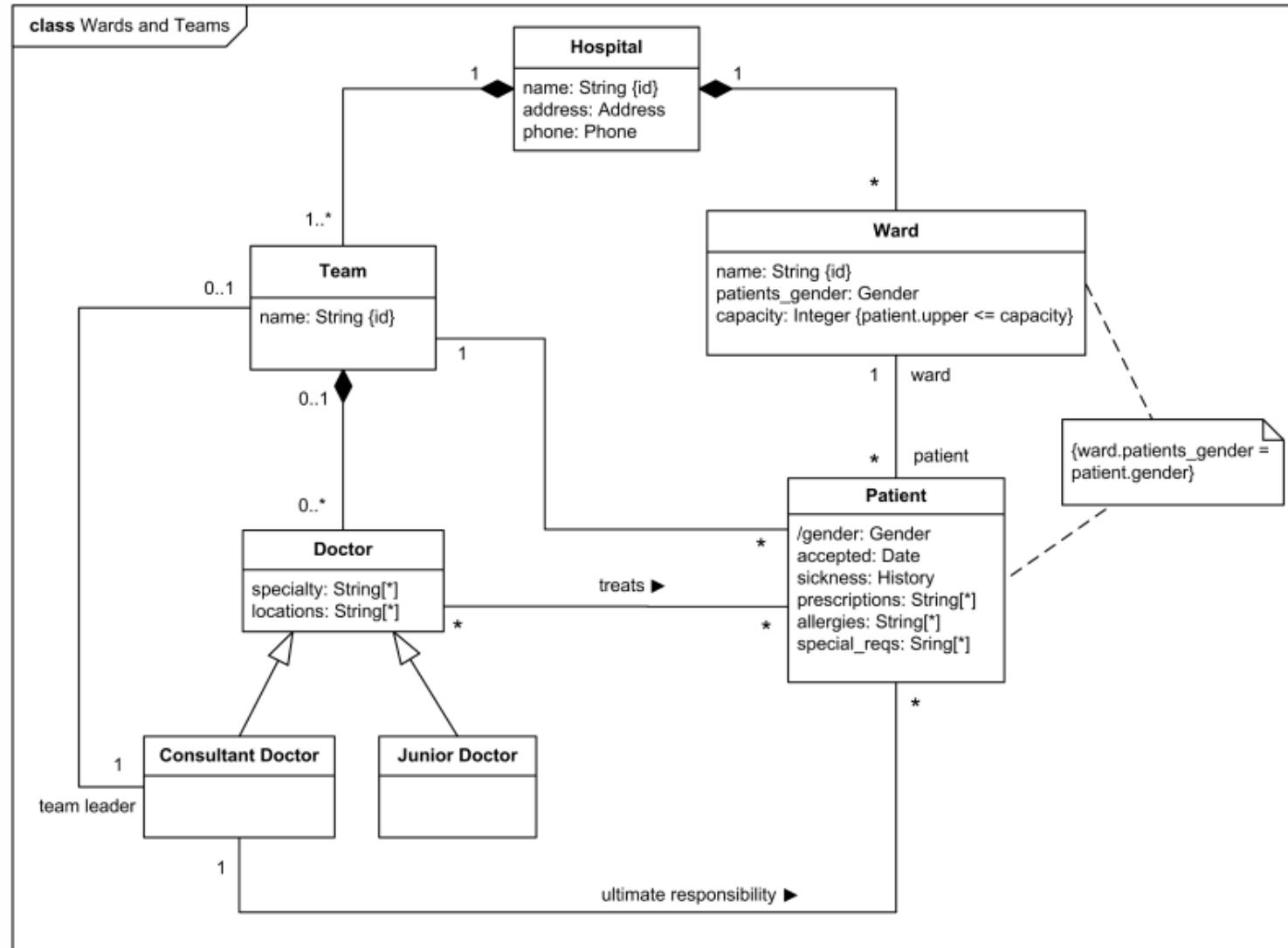
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Core Lifecycle Elements

- Requirements
- Design
- Construction
- Maintenance
- Testing
- Operation



Example: Class Diagrams



see also L3T2

Prescriptive Models

- Dictate how something should be done
- Examples
 - naming conventions
 - calling conventions
 - agile development
 - grammars as parser specs
 - configuration templates
- Usefulness depends on the context

Descriptive Models

- Explain how something could be done or has been done
- Examples
 - solution proposals
 - blueprints
 - visualisations
 - runtime traces
 - language manual
- Used in all domains of the industry

Predictive Models

- Produce forecasts on new data based on old knowledge
- Examples
 - code smell detection
 - defect prediction
 - effort estimation
 - code clone management
 - dev behaviour analysis
- Gaining a lot of popularity

Conclusion

- Prescriptive models
 - for development
- Descriptive models
 - for communication and simplification
- Predictive models
 - for thinking ahead
- All are useful, all are used

Topics/slides Disclaimer

- Good ✓

- watch before Q&A
- embrace reality
- try out at labs
- ask for feedback
- apply to project
- dig deeper
- recall from slides

- Bad ✗

- slides over videos
- assumptions
- blanks
- timing

