



ToDo List Project

U-Do-It

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Introduction

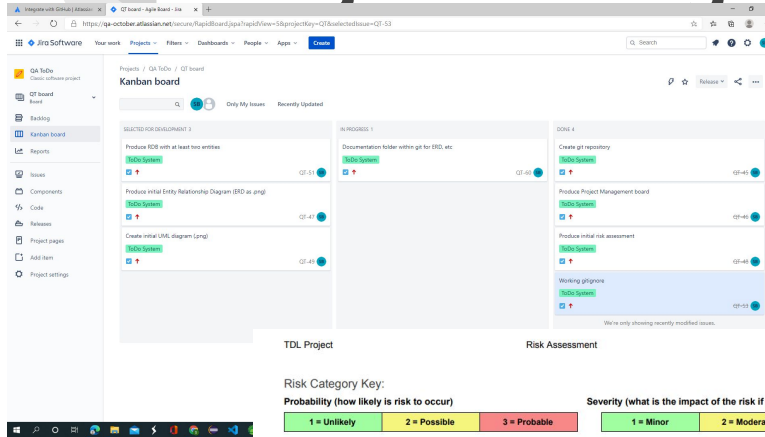
- Background
 - IT, Testing, Design and Project Management
- Approach - Agile
 - Industry leading SDLC (Systems Development Lifecycle Methodology)
 - Flexibility and speed to market



Technologies Used

- Project Management → Jira, Risk Assessment
- Design → ERD (data), UML (process flow), MVC Design Pattern
- Programming → java, mySQL, JavaScript, Bootstrap
- Testing → JUnit, Mockito, Selenium
- Version Control → git, GitHub (Continuous Integration)
- Tools → SonarQube, STS

Project Management



Kanban board

SELECTED FOR DEVELOPMENT

- Produce IDE with at least two entities
- Produce initial Entity Relationship Diagram (ERD as png)
- Create initial UML diagram (img)

IN PROGRESS

- Documentation folder within git for ERD, etc.
- Produce Project Management board
- Produce initial risk assessment
- Working gitignore

DONE

- Create git repository

TDL Project

Risk Assessment

Risk Category Key:

Probability (how likely is risk to occur)

Severity (what is the impact of the risk if it occurs)

1 = Unlikely 2 = Possible 3 = Probable

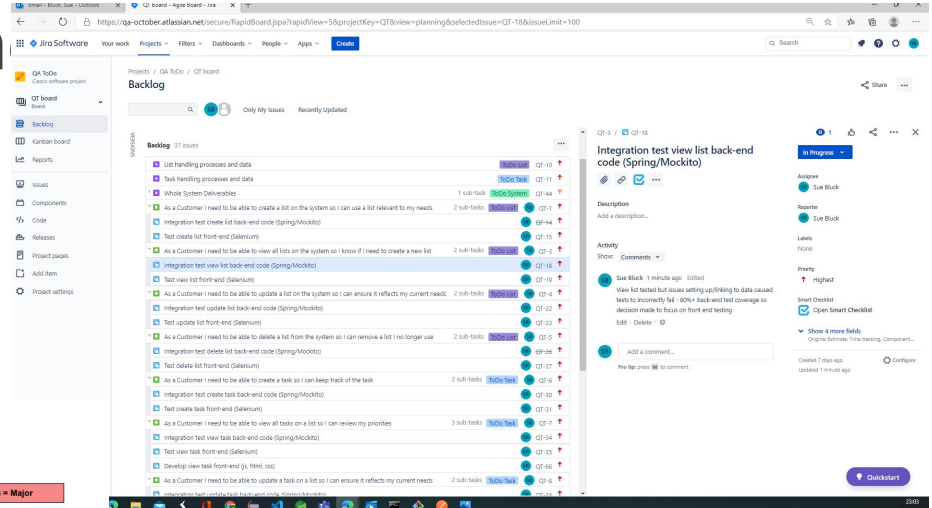
1 = Minor 2 = Moderate 3 = Major

Overall risk (probability x severity)

1-2 = Low 3-4 = Moderate 5-7 = High 8-9 = Very high

Initial Risk Assessment:

ID	Risk Description	Cause	Outcome	Probabil ty (1-3)	Severity (1-3)	Overall risk (1-9)	Mitigating actions
1	Lack of time	Tight timescales / time management	Incomplete project	2	3	6	Focus on MVP / Plan daily / sprint tasks and set goals. Review progress. Ensure non-code deliverables are uploaded after sufficient progress even if they may be amended later.
2	Lack of experience	New to Javascript, CSS and some of the tools. Not fully familiar with other areas (e.g. some areas of HTML, JUnit etc)	Incomplete project due to impact on time taken to complete some aspects of project	2	3	6	Practice Javascript and CSS / use of tools outside course, complete class exercises, request model answers if not available. Additional practice in other less familiar areas. Ask for trainer help if stuck.
3	Utilities failure	Power and or internet unavailable	No class access & minimal project progress during outage	2	2	4	Ensure laptop and phone charge maintained and local copy of resources where possible. Recording of teaching sessions facilitates catch up if required.
4	External disruption to resource availability	COVID-19 / home environment	Possible reduced internet speeds (more remote workers) / illness	3	2	6	Continue linking to the router via cable to minimise issues, turn off camera if internet slow. Regular hand washing etc. to reduce risk of illness.
5	Lack of progress	Overtired / overworking / overcomplicating project	Stress / difficulty completing project	1	2	2	Schedule breaks and spend some of each outside weather permitting, stay hydrated.
6	Unstable / non-working system	Insufficient testing	Substandard project	2	3	6	Allocate adequate testing time, save tested working copy before working on should/could-have features.



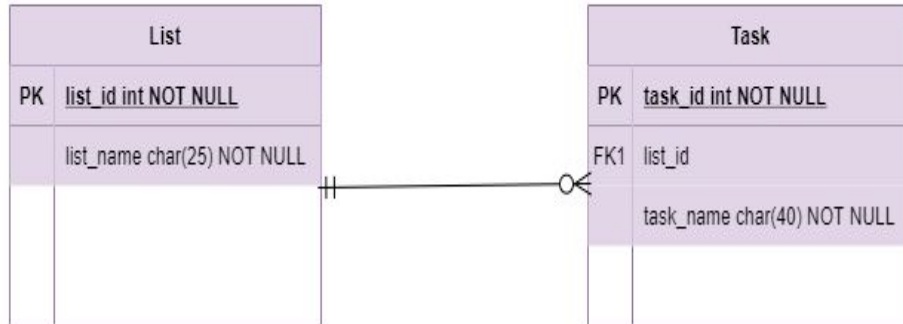
Backlog

- List handling processes and data
- Task handling processes and data
- Whole System Deliverables
- As a Customer I need to be able to create a list on the system so I can use a list relevant to my needs
- Integration test create list back-end code (Spring/Mockito)
- Test create list front-end (Selenium)
- As a Customer I need to be able to view all lists on the system so I know if I need to create a new list
- Integration test view list back-end code (Spring/Mockito)
- Test view list front-end (Selenium)
- As a Customer I need to be able to update a list on the system so I can ensure it reflects my current needs
- Integration test update list back-end code (Spring/Mockito)
- Test update list front-end (Selenium)
- As a Customer I need to be able to delete a list from the system so I can remove a list I no longer use
- Integration test delete list back-end code (Spring/Mockito)
- Test delete list front-end (Selenium)
- Integration test create task back-end code (Spring/Mockito)
- Test create task front-end (Selenium)
- As a Customer I need to be able to view all tasks on a list so I can review my priorities
- Integration test view task back-end code (Spring/Mockito)
- Test view task front-end (Selenium)
- Develop view task front-end (X-HTML, CSS)
- As a Customer I need to be able to update a task on a list so I can ensure it reflects my current needs

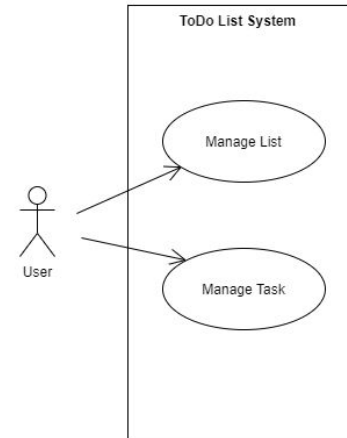


TDL Design diagrams

TDL - Entity Relationship Diagram



TDL - UML Use Case Diagram

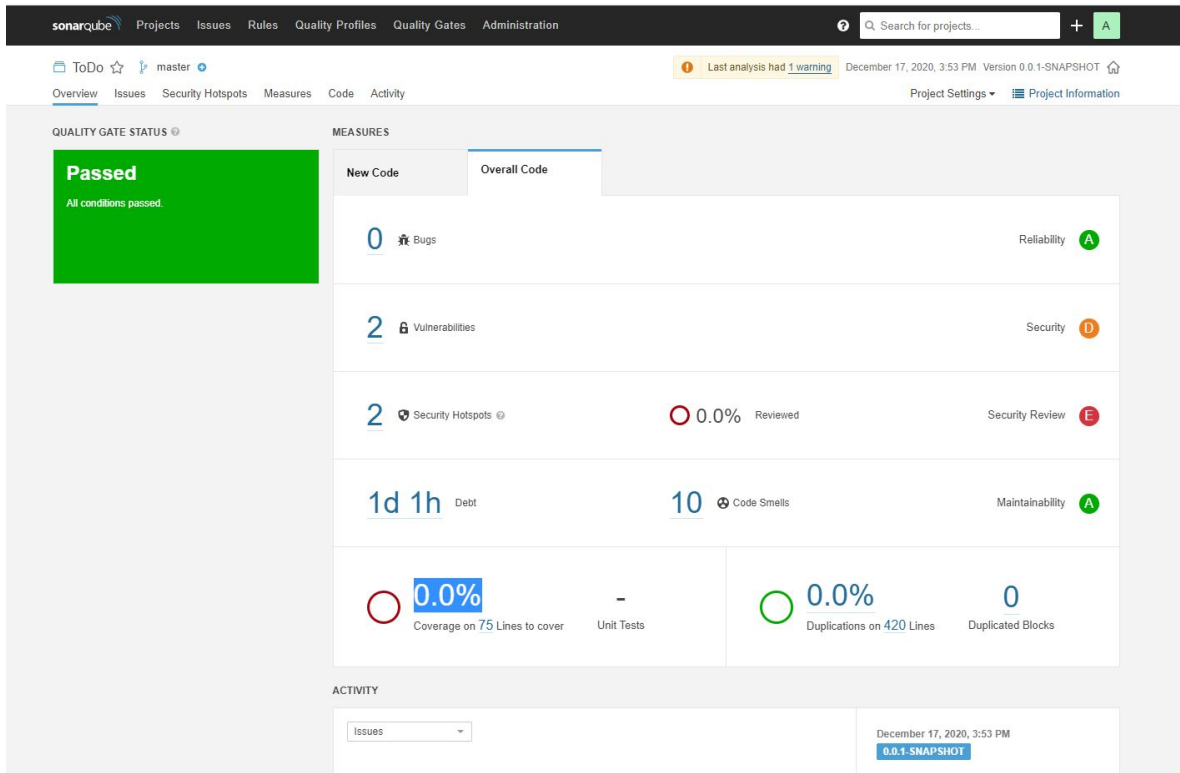


Testing coverage (junit/mockito tests)

Coverage					
ToDo (17 Dec 2020 22:56:19)					
Element	Coverage	Covered Instructions	Missed Instructions	Total Instructions	
▼ ToDo	96.5 %	1,639	59	1,698	
▼ src/main/java	91.4 %	339	32	371	
▼ com.example.demo.rest	92.5 %	98	8	106	
> TdListController.java	92.5 %	49	4	53	
> TdTaskController.java	92.5 %	49	4	53	
> com.example.demo.exceptions	0.0 %	0	6	6	
> com.example.demo.persistence.domain	80.0 %	24	6	30	
> com.example.demo	37.5 %	3	5	8	
▼ com.example.demo.service	97.5 %	158	4	162	
> TdListService.java	97.5 %	79	2	81	
> TdTaskService.java	97.5 %	79	2	81	
> com.example.demo.util	94.2 %	49	3	52	
> com.example.demo.config	100.0 %	7	0	7	
> src/test/java	98.0 %	1,300	27	1,327	



SonarQube





TDL Application

UDolt Home

your todo lists

+ List

Work

Update

Delete

Home

Update

Delete

Shopping

Update

Delete

your todos

+ Todo

Attend daily stand up

Edit

Delete

Arrange new Broadband contract

Edit

Delete



Sprint

Review

- Database structure
- 100% user stories

- Some testing
- Additional functionality

Retrospective

- Application of existing knowledge and experience

- Knowledge of languages and tools



Conclusion

- All requested functionality (user stories) delivered
- Scope for future functionality:
 - Task prioritisation
 - Task due dates
 - Improved user experience e.g. in-line editing (jQuery)