Project Report

[SCRUM management system]

Students

Borislav Aleksiev 279970

Dziugas Austys 280144

Ronald Johnson 279987

Przemyslaw Regulski 280196

Supervisors

Joseph Chukwudi Okika

Jakob Knop Rasmussen

VIA University College

[Number of characters]

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Appendices

Summary

For content see Appendix 3 “Project Report – VIA Engineering Guidelines”.

1 Introduction

As students at VIA UC, the members of SEP3 group 7 had encountered SCRUM development methodology in their previous semester. They as well as some of their fellow students found it quite tough to grasp at first glance. Therefore they decided that a software application can make SCRUM easier to understand and follow. The group finds the need for such solution not just in the difficulties they had with the initial SCRUM management but also in the amount of people who had to redo their projects due to misunderstandings regarding the methodology and the proper way of executing it. So the project is focused to help out primarily
students but also any group that is to take advantage of the SCRUM approach.

The goal of this tool is not to teach newcomers to SCRUM on how to do it. The idea behind it is to visualize better the sprints, the advance on the burndown chart and to allow SCRUM members to share their progress. This would allow the team to have a clear vision if they are falling behind schedule or keeping it in tact. This way the application will be also relevant to users who are familiar with the working principals of the methodology.

So the group concluded that SCRUM working principals appears overwhelming at first glance. What can we do in terms of software to ease up the work process?

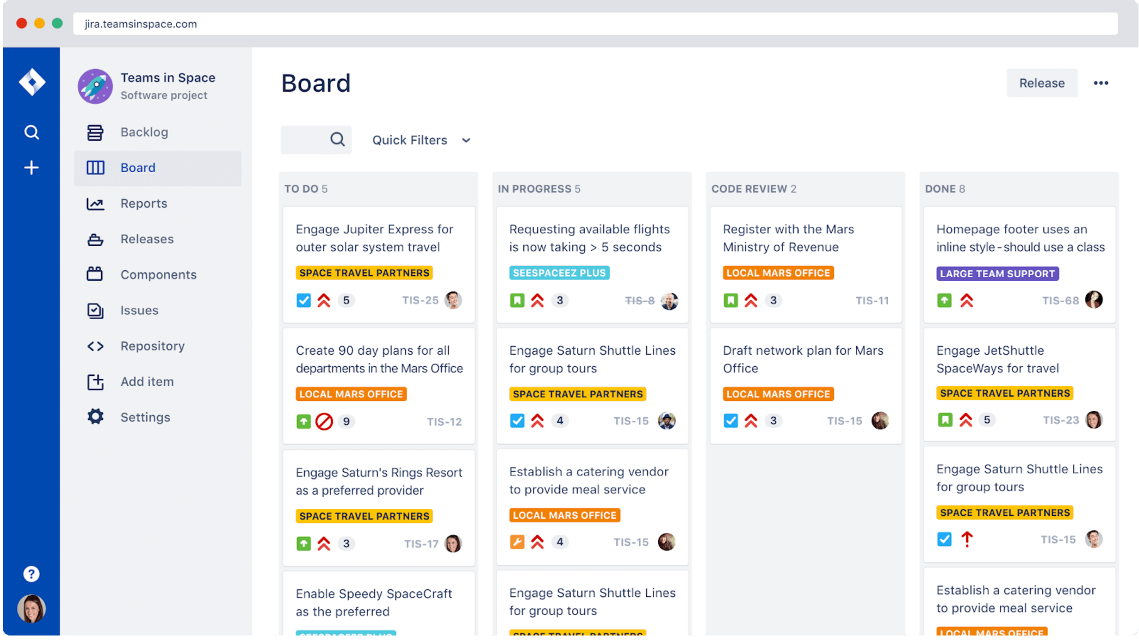
- What functionality will the application provide?
- What access will each kind of member have on the application?

Also when the group was thinking about the design of the system it concluded to the following delimitations:

- Application will not serve as a learning tool for new to SCRUM methodology users.
- Application will not have notification function.
- It will not support multiple projects at the same time.
- Application needs internet connection to be functional

2 Theory/literature survey

The group could not identify any software on the market resembling the idea however a solution called “Jira software” has the potential of being adapted as a SCRUM management software.



TO DO 5

Engage Jupiter Express for outer solar system travel
SPACE TRAVEL PARTNERS
5 TIS-25

Create 90 day plans for all departments in the Mars Office
LOCAL MARS OFFICE
9 TIS-12

Engage Saturn's Rings Resort as a preferred provider
SPACE TRAVEL PARTNERS
3 TIS-17

Enable Speedy SpaceCraft as the preferred

IN PROGRESS 5

Requesting available flights is now taking > 5 seconds
SEESPACEEZ PLUS
3 ~~TIS-8~~

Engage Saturn Shuttle Lines for group tours
SPACE TRAVEL PARTNERS
4 TIS-15

Establish a catering vendor to provide meal service
LOCAL MARS OFFICE
4 TIS-15

Engage Saturn Shuttle Lines for group tours

CODE REVIEW 2

Register with the Mars Ministry of Revenue
LOCAL MARS OFFICE
3 TIS-11

Draft network plan for Mars Office
LOCAL MARS OFFICE
3 TIS-15

DONE 8

Homepage footer uses an inline style - should use a class
LARGE TEAM SUPPORT
TIS-68

Engage JetShuttle SpaceWays for travel
SPACE TRAVEL PARTNERS
5 TIS-23

Engage Saturn Shuttle Lines for group tours
SPACE TRAVEL PARTNERS
TIS-15

Establish a catering vendor to provide meal service
LOCAL MARS OFFICE

Also it is known concurrent groups to ours is working similar solutions even though no further information is available on them as they are in a “work in progress” state.
Such system would remain relevant on the market not due to architectural uniqueness but for the purpose it serves as it may find application in both the professional or educating grounds.

3 Methods

The project work follows the principles of Unified process(UP) and includes the SCRUM sprints division of the workload (Appendices 1).
As far as technical specifications go, the system follows a three-tier architecture(Appendices 2).

The first tier is implemented as Java app which is to be distributed to the individuals who can be referred to as “Users”. This part of the system features a MVC pattern and a JavaFX styled GUI. It holds only logic responsible for the View and connecting to the second tier.

The second tier is a C# .NET Core server allowing the system to become heterogenic since its client is a Java app. The communication between the first and the second tier is established through a RESTful HTTP requests. It acts as a business layer and does not hold any direct data management logic, however it establishes a Socket connection to the third tier of the system.

The third tier Is a C# server responsible for the data storage and management.

4 Results/findings and Discussion

Even though the project was going really close to the tempo that was initially set for it, it did not manage to achieve complete functionality.

Success:
The tier 2 of the system was justified functional after testing via “Postman”
The tier 1 was justified as functional after successfully managing the five types of HTTP requests towards the tier 2.
The functionality of tier 3 was verified by successfully connecting it to the second tier.
Improved GUI was successfully added wherever necessary

Failure:
In the last Sprint of the work the Client (Tier 1 of the system) was no longer able to pass arguments to the second tier. The issue was not addressed due to appearing very close to the deadline and the responsible face for it being unable to fix it (Appendices 3).

For further information about each sprint and its results refer to Appendices 4.

5 Conclusions

For content see Appendix 3 “VIA Engineering - Project Report Guidelines”

6 Sources of information

For content see Appendix 3 “VIA Engineering - Project Report Guidelines”

Appendices

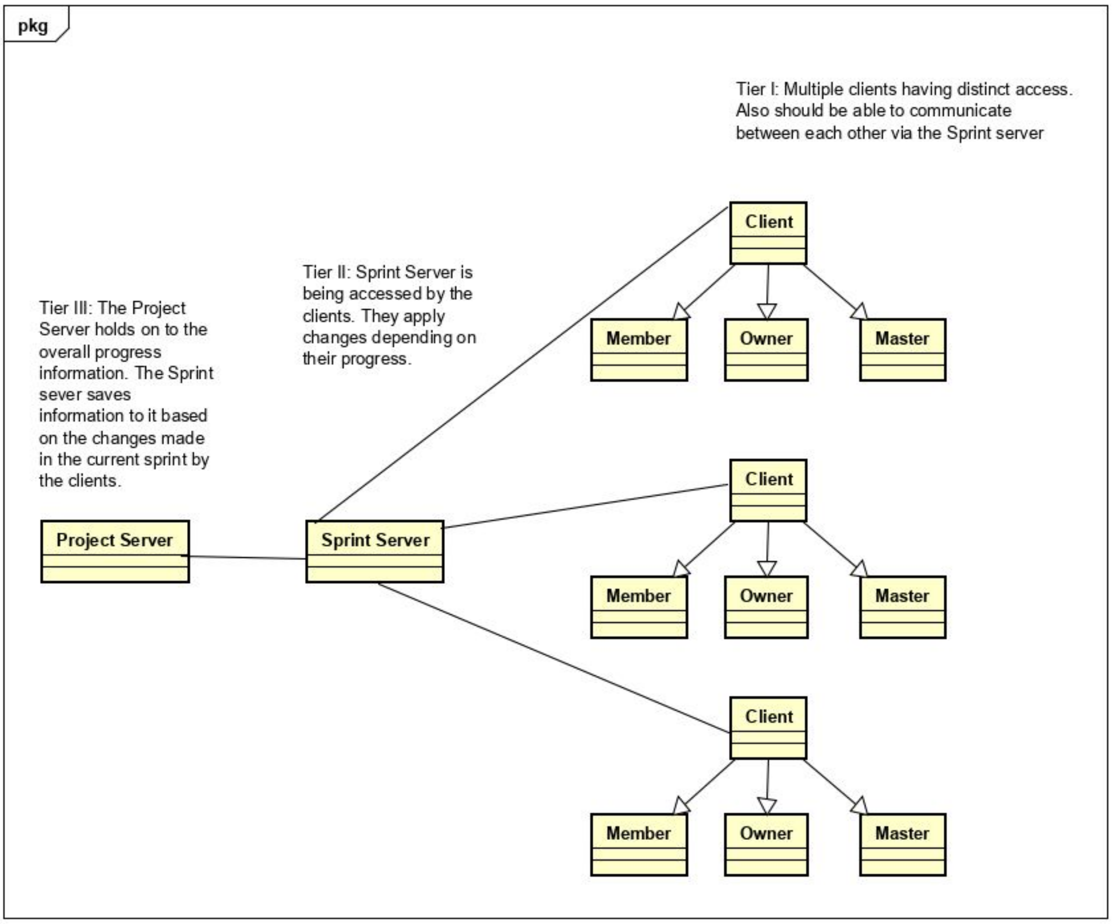
1.Timetable

Date	Milestones	Goal	Note
4 September	Inception phase start	Project description, Architecture design (Conceptual domain, sequence diagram, System architecture Diagram)	
28 October	Elaboration phase start	Demonstrate a working skeleton of the designed 3 tier architecture	
2	Construction phase start Sprint 1	Develop a beta tier 2 Web API with .NET Core	Successfully implemented the tier 2 server with a User model

5	**Sprint 2**	**Develop a beta tier 1 client in java**	**Successfully created a REST client executing the 5 types of HTTP requests towards the web API**
8	**Sprint 3**	**Develop a database tier 3 Server in C#**	**Successfully developed a basic C# server establishing a Socket connection to the Web API.**
10	**Sprint 4**	**Set up the designed database in the tier 3 and edit the Web API respectively.**	**Goals were successfully reached and tested via Postman**
13	**Sprint 5**	**Edit the tier 1 client in order to apply to the new HTTP methods on the Web API**	**All changes made, however the client lost the ability to pass arguments with its calls**

16	**Sprint 6** **Documentation preparation**	**Prepare the project/process reports for the final hand in and Work on a fix for the client issue**	**Documentation prepared, even when facing the new template format however the client problem remains.**
20	**Final hand-in**	**Upload**	**Done**

2. Architecture diagram

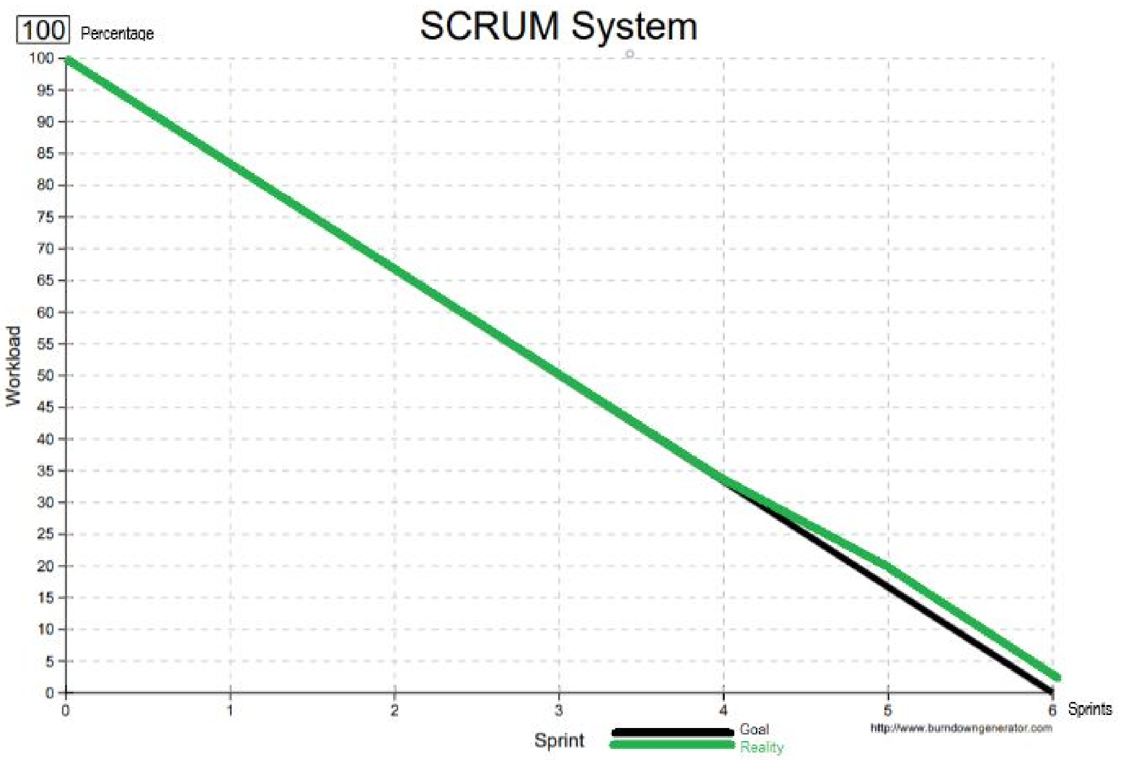

pkg
Tier I: Multiple clients having distinct access. Also should be able to communicate between each other via the Sprint server
Tier II: Sprint Server is being accessed by the clients. They apply changes depending on their progress.
Tier III: The Project Server holds on to the overall progress information. The Sprint sever saves information to it based on the changes made in the current sprint by the clients.
Project Server
Sprint Server
Client
Member
Owner
Master
Client
Member
Owner
Master
Client
Member
Owner
Master

3.Risk assessment

Risks	Likelihood Scale: 1-5 5 = high risk	Severity Scale: 1-5 5 = high risk	Product of likelihood and severity	Risk mitigation e.g. Preventive- & Responsive actions	Identifiers	Responsible
Member(s) lack of technical understandi	**2**	**5**	**3**	**Communicat e with supervisors, discuss with**	**Unfinished project**	**Przemyslav Ragulski**

ng				the group about erupted problem.	parts,	
Application is not cooperating with database.	3	3	5	Re-check database structure. Have a notification which alerts about connectivity errors.	Application shows wrong data.	Ronald Johnson
Will not be able to meet with given supervisors	5	5	5	Schedule meeting with supervisor before all the meeting spots are filled up.	Lack of communication With supervisor	Przemyslav Ragulski
A member falling sick	4	5	4	A member falling sick resulting in inability to work		Borislav Aleksiev

4.Burndown chart



5.