

Customer Driven Project - Netlight

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Abstract

Imagine the old minemachine systems where the end user works in a domain specific application in a black-and-green terminal. She is super efficient, jumping between windows with short cuts and everything is "in her fingers".

This is then replaced with a web-frontend and a mouse. Everything is "wrong", the design makes the usage patterns locked and she gets "mouse sickness" from point-clicking every command.

The task is to modify a web-application and add a scripting-console where the end-user can enter commands into a DSL - similar to the older interface. When commands are run, the results are shown both in the console and the web-interface. The use can still use the mouse and navigate as usual.

The target is a simple proof-of-concept in order to research any changes to the API, the potential of the method as well as evaluate the usability of scripting languages/DSL and API.



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Contents

1	Introduction	3
1.1	NTNU	3
1.2	Netlight	3
1.3	General information about project	3
1.4	Contact information	3
1.5	Goals	3
1.6	Planned Effort	4
1.7	Goals	5
1.8	Planned effort	5
1.9	Schedule of results(Milestones, deliverables, sprint deadlines, etc)	5
2	Project management	6
2.1	Project plan	6
2.1.1	Sponsor/customer	6
2.1.2	Background	6
2.1.3	Gantt diagram	6
2.2	Team structure	6
2.2.1	Roles	6
2.3	Risks	6
2.4	Architecture	6
2.5	Scrum	6
2.6	Quality Assurance	6
3	Preliminary Study	7
3.1	Concept	7
3.2	Constraints	7
3.2.1	Time	7
3.2.2	x	7
3.3	Feasibility study	7
3.4	Version control	7
3.4.1	git	7
3.5	Development language and technologies	7
3.5.1	Google Drive	7
3.6	Development Methodology	7
3.6.1	Scrum	7
3.6.2	The Waterfall Method	7
3.7	Code conventions	7
3.8	Similar solutions	7
4	Requirements	8
4.1	Usecases/user stories	8
4.1.1	Planning	8
4.2	Sequence Diagrams	8
4.3	Prioritization	8
4.4	Functional Requirements	8
4.5	Nonfunctional Requirements	8
4.6	Test Plan	8

5	Overall System Design	9
5.1	Database	9
5.2	GUI	9
6	Sprints	10
6.1	Design	10
6.2	Planning	10
6.3	Duration	10
6.4	Goals	10
6.5	Testing	10
7	Testing	11
8	Conclusion	12
9	Evaluation	13

List of Figures

Chapter 1

Introduction

1.1 NTNU

1.2 Netlight

Netlight, our customer, is a Swedish IT- and consulting-firm. Their field of expertise is within IT-management, IT governance, IT-strategy, IT-organisation and IT-research. They deliver independent solutions based on the customers specs. With the broad field of knowledge they can handle whatever tasks presented by their customers. They reach this goal by focusing on competence, creativity and business sense. ¹

1.3 General information about project

The project is the making of the course TDT4290 Customer Driven Project. This is a mandatory subject for all 4th year students at IDI and aims to give all its students experience in a customer guided IT-project and the feel of managing a project in a group. The customer assign the group a task which makes the project close to normal working life situation.

This is a proof of concept project. The underlying task is to research and develop a system where power users can benefit from a console. The concept aims to ease the workload of a power user who is working with object editing, and to see how the efficiency of a console might prove to improve the work. The power user is usually a user who often works with the system over a longer time, and is in depth familiar with the system. We will research already existing systems of this kind, and look at the possibilities and advantages of such a system in a chosen domain.

1.4 Contact information

Person	Email	Role
Ivo Dlouhy	idlouhy@gmail.com	Team member
Martin Havig	mcmhav@gmail.com	Team member
Oystein Heimark	oystein@heimark.no	Team member
Oddvar Hungnes	mogfen@yahoo.com	Team member
Peder Kongelf	peder.kongelf@gmail.com	The customer
Stig Lau	stig.lau@gmail.com	The customer
Meng Zhu	zhumeng@idi.ntnu.no	The advisor

1.5 Goals

1. Create a working prototype of a system where a scripting console is embedded into a modern web interface. The console should provide access to viewing and modifying the underlying data objects of the system's domain via a DSL.
2. Investigate the ramifications of the added functionality, in terms of usability and technical aspects.
3. Provide extensive documentation and a successful presentation of the end product.

¹<http://www.netlight.com/en/>

1.6 Planned Effort

Role	Description	Assignee
Team leader	Is responsible for administrative tasks and makes the final decisions.	Ivo
Scrum Master	Shields the development team from external distractions and enforces the Scrum scheme.	Ivo
Customer Contact	Handles communication with the customer. The customer should contact this person regarding general requests, questions and reminders.	Ivo (backup Martin)
Advisor Contact	Handles communication with the advisor. The advisor should contact this person regarding general requests, questions and reminders.	Ivo (backup Martin)
System Architect	Is responsible for the system architecture including distinctions and relations between subsystems and general code design choices.	Martin
Code Master	Overall responsible for code management and structure. Managing branches in Git repository.	Oddvar
GUI Designer	Is responsible for the layout and design of graphical user interfaces.	Oddvar
Test Manager	Is responsible for testing including unit tests, integration tests and usability tests.	Øystein
Report Manager	Is responsible for delegating and overseeing work on the project report.	Martin
Customer Representative	Participates in regular meetings to discuss the progress, project status and future tasks. Represents the customer.	Peder Kongelf
Customer Technical Advisor	May be consulted about technical aspects of the project.	Stig Lau
Advisor	Serves as a one-man steering committee for the project.	Meng Zhu
Meeting Secretary	Is responsible for making sure notes get written and sent after each meeting with the advisor and customer.	Oddvar
Quality Assurance Manager		Øystein
Weekly Report Writer	Is responsible for finalizing the weekly report(s) for the advisor and customer, and getting these delivered for approval. Also responsible for meeting agendas and their delivery.	Øystein
Time Keeper	Responsible for making sure that everybody is logging their work, and logging team activities.	Oddvar

1.7 Goals

1.8 Planned effort

1.9 Schedule of results(Milestones, deliverables, sprint deadlines, etc)

Chapter 2

Project management

2.1 Project plan

2.1.1 Sponsor/customer

2.1.2 Background

2.1.3 Gantt diagram

2.2 Team structure

2.2.1 Roles

2.3 Risks

2.4 Architecture

2.5 Scrum

2.6 Quality Assurance

Chapter 3

Preliminary Study

3.1 Concept

3.2 Constraints

3.2.1 Time

3.2.2 x

3.3 Feasibility study

3.4 Version control

3.4.1 git

3.5 Development language and technologies

3.5.1 Google Drive

3.6 Development Methodology

3.6.1 Scrum

3.6.2 The Waterfall Method

3.7 Code conventions

3.8 Similar solutions

Chapter 4

Requirements

4.1 Usecases/user stories

4.1.1 Planning

4.2 Sequence Diagrams

4.3 Prioritization

4.4 Functional Requirements

4.5 Nonfunctional Requirements

4.6 Test Plan

Chapter 5

Overall System Design

5.1 Database

5.2 GUI

Chapter 6

Sprints

6.1 Design

6.2 Planning

6.3 Duration

6.4 Goals

6.5 Testing

Chapter 7

Testing

Chapter 8

Conclusion

Chapter 9

Evaluation