2016

Interim Project Planning and Investigative Report

BLAZEJ GDANIEC 10/11/2016

Interim Planning

Aim

The aim for this project is to create a Room Booking with personal calendar that will allow the employees to easily crate meetings and books rooms within the company. This project will involve investigating the data encryption and implementing connection between the company server. My plan is to also investigate other similar software to see the pros and cons and try to overcome those problems in my software.

Composition

This software will be composed of 3 parts. First part will be the Calendar side of the program the second part will be writing up the room booking system and the last part will be creating the database. The database will store all the employees details, room bookings and all notes that have been attached to an event.

Methodology

I will be working using the agile methodology as I have a previous experience working with it. I will be doing each phase of the project in parts. This will happen by setting my self a time limit on each phase depending on the size. The bigger parts of the project will be broken down into smaller phases.

Plan

I will develop a prototype before a final version of the software for people to get to see and use the program this will happen before final version testing. I am planning to create a questionnaire for employees of World of Books to hear their views about the software and what ideas they have that could be implemented with the software. The second questionnaire will be after the first test stage for group of employees that can write what they like and dislike about the program and what can be changed to increase productivity.

Stakeholders

The main stake holder is World of Books. This stakeholder creates requirements for the development stage. I will demo the prototype to the company and wait for the feedback before launching the final stage of the software.

Objectives

- Create Software UI
  - Create UI to get the visual point of view on the software

Create the Core

  - Develop the code for the software which will work with the Database
- Create Database
  - Set up database from requirements
- Create a Test Data for database
  - Create Dummy data for the database so the tests can begin with dummy data
- Create a Local network to test connection between two stations
  - See how the communication while testing the software
- Linking the database with the interface and local network
  - Preparing the software for the Test Stage
- Create Tests
  - Create Tests for each phase of development

Schedule of Activities

At Risk	Task Name	Status	Start Date	End Date
	System Requirements		**15/09/16**	**30/10/16**
	Gather all requirements	Complete	15/09/16	25/09/16
	Create UML	Complete	23/09/16	20/10/16
	Set up environment	Complete	20/10/16	30/09/16
	Coding		**30/10/16**	**01/02/17**
	Write up the main Booking System	Not Started	30/10/16	30/11/16
	Write up personal Calendar	Not Started	01/12/16	24/12/16
	Merge Booking System & Calendar	Not Started	24/12/16	30/12/16
	Create Database / Add user groups	Not Started	01/01/17	30/01/17
	Testing		**01/02/17**	**01/04/17**
	Create Test	Not Started	01/02/17	14/02/17
	Set up testing environment	Not Started	14/02/17	16/02/17
	Test	Not Started	16/02/17	28/02/17
	Apply Changes from test feedback	Not Started	01/03/17	10/03/17
	Test the program after final changes	Not Started	10/03/17	23/03/17
	Submit	Not Started	01/04/17	01/04/17

System Requirements:
Risk: The requirements are incomplete.
Effect: The software will not work as expected, will have missing options or will not work at all.
Control: Do appropriate research within the company and also by checking other similar software documentations.

Coding:
Risk: The data encryption will not be working as expected.
Effect: The software will not go live as it will not have appropriate data security and could cause a private data to be leaked. This could have a very big impact on the company this size.
Control: Do appropriate research within the security and encryption section.

Testing:
Risk: The test might catch fatal errors within the projects which would take to long to solve the problem.
Effect: The software will have errors which will not allow the user to use to software as expected or the software will not work at all
Control: After each stage create a test and test every button and function to test if it works as expected.

Database:
Risk: The database becomes to slow with a number of employees using the software and amount of data being stored
Effect: The Software becomes slow or unresponsive.
Control: Create test data for the database and test it to see how much the database can store until it starts slowing down.

Investigative Report

This project has a large focus on the data encryption side as it will store private and sensitive data. The two main research areas will be the Java side of software which will send the data to the database where it will be encrypted.

The first question what encryption does to the data? In the database security "encryption secures the actual data within the database and protects backups. That means data remains protected even in the event of a data breach [1]". This paragraph explains how well the data is protected. The encryption is the most important security when it comes to storing confidential information.

I chose this project as there is no such software within the company. The software will process all the data into the local database which will be much more secure then keeping all the confidential information from meetings on paper where anyone could get hold of them this is why I am planning to put in place Twofish algorithm which is "one of the fastest of its kind, and ideal for use in both hardware and software environments [2].". This would be ideal with amount of data being transferred in and out.

The whole process of developing a software for a large company comes with gathering appropriate requirements. This requires investigating not only software requirements but also hardware requirements. Gathering requirements is the hardest task as without them nothing will work. This can cause delays in the development phase "As many studies have shown, errors in this stage of development often lead to overall project failure with disastrous consequences [3]". The requirements allow to create timelines for the project, estimate costs and estimate how long it will take to develop the software.

Bibliography

Christian Kirsch, Thales. (2009) The role of encryption in database security. [online] https://www.helpnetsecurity.com/ Available at: https://www.helpnetsecurity.com/2009/05/13/the-role-of-encryption-in-database-security/

This Article is very interesting and tells everything you need to know about encryption, doesn't go into much depth but gives an overall about security.

Contel Bradford, (2016) 5 Common Encryption Algorithms and the Unbreakables of the Future. [online] http://www.storagecraft.com/ Available at: http://www.storagecraft.com/blog/5-common-encryption-algorithms/

This author tells about all common encryption techniques and describes each one of them how it works and if its good or bad to use. In the Article you can also find future encryption techniques.

Ray Phariss, (2016) The importance of Requirements Definition in IT Systems Development. [online] http://www.umsl.edu/ Available at: http://www.umsl.edu/~sauterv/analysis/f06Papers/Phariss/

Very good paper describing how important requirements are for the project. Describes how good requirements help with the project development.

References

[1]: Christian Kirsch, Thales. (2009) The role of encryption in database security. [online] https://www.helpnetsecurity.com/ Available at: https://www.helpnetsecurity.com/2009/05/13/the-role-of-encryption-in-database-security/

[2]: Contel Bradford, (2016) 5 Common Encryption Algorithms and the Unbreakables of the Future. [online] http://www.storagecraft.com/ Available at: http://www.storagecraft.com/blog/5-common-encryption-algorithms/

[3] Ray Phariss, (2016) The importance of Requirements Definition in IT Systems Development. [online] http://www.umsl.edu/ Available at: http://www.umsl.edu/~sauterv/analysis/f06Papers/Phariss/