ONLINE BANKING SYSTEM

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ICT Engineering

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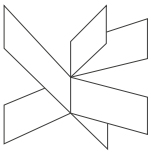

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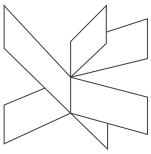


1 Background description

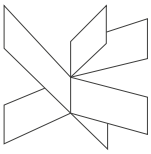
The need of online banking systems has been given more attention in present. In 21th century many banks provide their customers with possibility to: check balance, transfer money (send or/and receive), get a payment history and many more functions online.

In old days (when computers were not part of people's daily lives), for every need of transferring money, depositing money, checking balance and so on people needed to visit their banks, wasting time in waiting in the long queues to operate with their money. Nowadays, since computers and internet takes a big part of people daily lives is much easier for everyone to do all necessary operations online.

Today many banks provide their customers with opportunity to operate with their accounts online either with mobile-applications or websites. Some banks provide applications which are faster and have the possibility to store the history of customer`s account, others are using websites.

To use websites, costumers must open browsers which makes it more time consuming and less secure. By providing people with online tool will help them operate their accounts safer and faster, which is a step to make customers life easier.

Another benefit of providing people with opportunity to operate with their money online helps banks to deduct their work load



(less need of employees helping customers to transfer money and checking their balance).

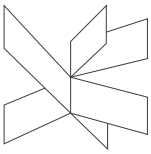
2 Definition of purpose

The purpose of this project is to create a desktop banking application, so it is no longer necessary to open a browser to do online banking and thereby making it easier and less time consuming.

3 Problem Statement

The main problem of the project is to make desktop application for a bank, that connects its clients to the server offering them a wide range of features.
Questions related to features of the application:

- How do clients receive money?
- How do clients transfer money?
- How to make a secure log-in system?
- How to make client connect to the server?
- How to identify a client?
- How to save information?
- How to pay interest to clients account?
- How to simulate NEM-ID for security purposes?
- How to join accounts?



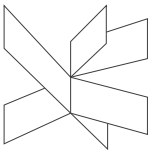
- How can a client check his/her balance?
- How to print out the transaction history?
- How to make various kinds of users (Clients and admins)?
- How to make a secure system?

4 Delimitation

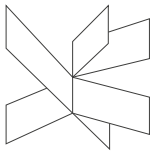
- Clients will not be able to invest money or apply for loan.
- The application will not recover forgotten passwords.
- Clients can not apply for new credit card if the card is lost.
- Support chat system will not be implemented.

5 Choice of models and methods

What -partial problem.	**Why -study this problem – related to the purpose of the project.**	**Which -level of the outcome is expected.**	**Which -methods/ models/ theories will be used**	**Who -in the group is the main responsible person for this point.**	**What -Is the estimated workload (hours)**
User Login	Security	Fully function login in using NEM-ID-Simulation	Comparing the input values.	Mohamed	12



Nem-ID-Simulation	Security	A NEM-ID-Simulation used to login and transferring money	Making a Map and storing random generated values	Hristo and Faizan	24
Transfer money	Main purpose of banking system	Possible to transfer money to other account from the same bank using nem-id-sim	Finding recipient's name and id and adding money to his/her balance.	Tor	6
Receive money	Main purpose of banking system	Possible to receive money.	Adding money to Balance	Faizan	6
See Balance	Min purpose of banking system	Possible to see current balance of all account	Showing information on a Panel	Mohamed	3
Joint account	User friendly	Possible for two or more people to having one account	Making an extra class which will handle tasks related to Joint accounts	Faizan	6
Having more than one account	User friendly		Creating new account for same client	Hristo	12
Connection between program/server/ DB	Necessary for functional program	Fully functional	Creating an Adapter class	Tor	24
Getting interest	Necessary for the bank	Possible to get interest	Calculating and adding into balance	Mohamed	3

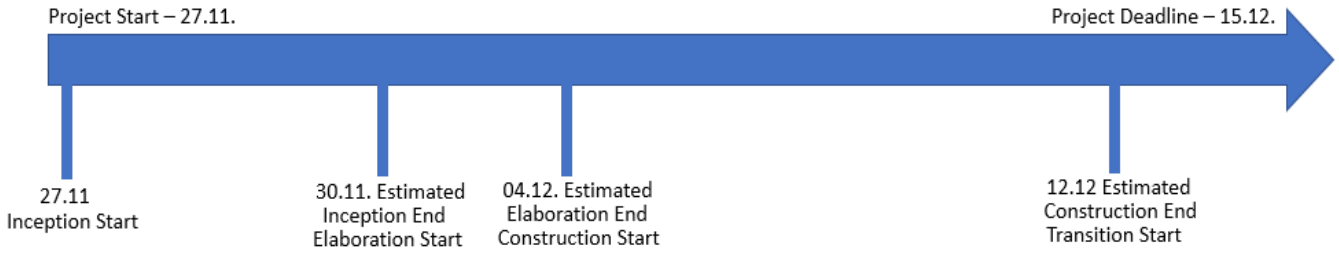


See transection history	User friendly	See full history of transaction since the account was made	Showing information on a Panel	Faizan	12
Creating different user type	Different User types	Create diverse types of users (administrator and clients)	Dividing users by making subclasses of User(superclass).	Hristo	10

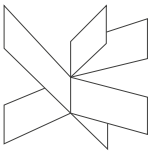
6 Time schedule

The estimated number of workhours is 480 hours for the project. SCRUM will be used to control the development process.

The plan is estimated to be as followed:



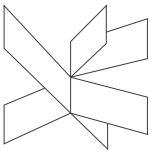
Each sprint length is going to be three days long.



For the inception we have estimated three sprints, for elaboration we estimated two sprints, for the construction we estimated four sprints and for the transition we have estimated two sprints.

7 Risk assessment

Risks	Description	Likelihood Scale: 1-5 5= high risk	Severity Scale: 1-5 5= high risk	Risk mitigation e.g. Preventive- & Responsive actions	Identifiers	Responsible
Data loss	Losing project's data	2	5	Having a backup of data.	unpredictable	Tor
Security vulnerabilities	Hackers accessing client's data.	3	5	Making a robust system	Antivirus identifying virus attacks	Faizan
Lack of equipment	Not having required equipment for work	2	5	Acquiring missing equipment	Something breaks down or not working	Hristo
Lack of knowledge	Lacking specific knowledge for a task	2	4	Reading books, searching online for more information	Realization of lacking the knowledge	Group
Absence of fellow group member	A group member being absence.	2	4	Working extra hours if needed	Unpredictable unless the member informs the group	Mohamed
Human error	Making an error unknowingly	2	3	Correct the error	Unpredictable	Tor
Not fulfilling the important requirments	Not fulfilling the important requirements	2	5	Register the problem and reasons in reports	Not having enough time	Faizan



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- Thomas Connolly & Carolyn Begg, 2009. Database Systems
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