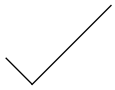
Exercise Sheet 3
First Tasks

1. If not done already, install and get acquainted with MagicDraw.



2. Write down use cases to evaluate the requirements.

Name – Lottery
Description –Description of the project to have exact requirements what the program should look like and what it can do.
Actors – Primary Actor: Every with the compiled code.
Secondary Actor: Programmer
Includes – None
Trigger – User gets the option to choose between 4 functions in the program.
Preconditions – Showing the player a menu with certain functions he can use.
Postconditions – Player can see the results of the Lotto drawing.
Normal flow – 1. The system provides in the console a Menu where the player can decide what he want to do next.
2. One after another all player are asked to enter their name and 6 numbers between 1 and 49. Each number can only entered once.
3. randomly 6 different numbers between 1 and 49 are drawn and displayed on the screen.
4.The drawn number and the according players name are printed on the screen. For every player the number of correct hits are shown as well.
5. The Program gets closed.
Alternativ flow – The user can also look for the numbers or for the winners without playing himself. Also he can close the program directly without playing.
Wrong input repeats the question for an input.
Use case history– Lottery_UC_1.00 , Elvin Buljubasic, 19.05.2015

3. Please publish your organizational structure and name the selected process model!

We are planning to use the Software prototyping to have a preferably early resolution. So if we got the Prototyp and our first feedback we can focus on improving the program if bugs or similar happens.
The process model we decided is the Waterfall model, because with it we can split the project in several phases, which we can complete step to step from time to time.

4. Setup tools you plan to use during the development, e.g., SCM, programming language, etc., and give an explanation, why you made the selection!

Magic Draw: Magic Draw will be our modeling tool to create UML's etc.

Eclipse: Java will be our programming language because we got the most experience with it.
We are Planning to use Eclipse because we also got the most experience with it and it has many useful features,which can us support with the programming.

Git: Git will be our SCM, because its probably the most popular and we are going to use it in association with Github.

5. Prepare a documentation structure within your chosen SCM tool!
https://github.com/ElvBC/SWE-Design.git

A README.md for some informations.

Documentary ->ProjectGoalsSh3.txt for short overview over the next goals of the project_with Sheet3

Documentary->Sheet3Upload.pdf the sheet3 converted to pdf

Documentary->Sheet3Upload.doxc the sheet3 converted to docx.

LotteryProgramm->Changelog.txt to see the last changes fast.

LotteryProgramm->Main.java the SourceCode of the Main.

6. Prepare a first project estimation:

- **Revisit the principles of metrics**
  A metric is a quantitative measure of the degree to which a system, component, or process possesses a given attribute.
- **Define suitable metrics for you project, application and development team!**
  - **Project:** This includes the actually status of the project including the milestones, project scope changes and schedule variance
  - **Application:** This includes the ruffly range of the application,(The lines of code and the reusability etc.)complexity, quality of prototypes, clean code and the final product
  - **Development:** This includes analyzing different tasks and giving points to them and split them in the team.
- **Perform a first estimation !**
  We estimate to have 80-140 lines of code.
  The Code should implement user-friendly input and output.
  Also the code generates a random number for the lotto game itself.
  We also need error handling, so if the user doesn't behavior like imagined, he get's an user friendly and easy explanation why the input didn't work.

  The work for the project is splittet up so everybody knows what he has to do, what basically should be no problem,

- **Determine a preliminary project schedule and visualize it!**

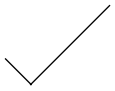
Planning phase: Estimating the project details and fulfill requirements of the project
17.05.2015

Software phase: First prototypes will be builded and missing functions will be supplemented from time to time
18.05.2015

Testing phase: Testing the program to get some feedback and improve mistakes and accomplish the final program.
20.05.2015-21.05.2015

Final phase: Project is getting published
21.05.2015-22.05.2015

7. Please write a report about the tasks and put the source file (like TEX or docx) into your version control system and submit a pdf version in moodle!



8. Be prepared to present the current project status!