

**Silesian University of Technology**

**Faculty of Automatic Control, Electronics   
and Computer Science**

##### Final Project

##### (choose appropriate)

Title centered (font: 14 pt, spacing: 1,5 line)

Author: name and surname (font: 14pt, position: 19 cm from the upper margin)

Supervisor: title,name and surname (font: 14pt)

Consultant: title,name and surname – if applicable (font: 14pt)

Gliwice, month year (e.g. Gliwice, June 2010) font 12 pt, Załącznik Nr 2 do Zarz. Nr 97/08/09

**Oświadczenie**

Wyrażam zgodę/nie wyrażam\* zgody na udostępnienie mojej pracy dyplomowej/rozprawy doktorskiej\*

…………….………., dnia …………………………

……………………………………..……………….……

*(podpis)*

……………………………………………………………

*(poświadczenie wiarygodności podpisu przez Dziekanat)*

*\* właściwe podkreślić*

**Oświadczenie promotora**

Oświadczam, że praca „Title of the Final Projectrskiej” spełnia wymagania formalne pracy dyplomowej inżynierskiej.

|  |  |
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| Gliwice, dnia ……………………… | ………………..……………….……  *(podpis)* |

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# Introduction

This chapter contains following elements:

* introduction into the problem domain,
* settling of the problem in the domain,
* objective of the thesis,
* scope of the thesis,
* short description of chapters,
* clear description of contribution of the thesis’s author – in case of more authors table with enumeration of contribution of authors.

# [Problem analysis]

This chapter contains following elements:

* problem analysis,
* state of the art, problem statement,
* literature research (all sources in the thesis have to be referenced [1, 2, 4, 3]),
* description of existing solutions (also scientific ones, if the problem is scientifically researched), algorithms, location of the thesis in the scientific domain.

# Requirements and tools

This chapter contains following elements:

* functional and nonfunctional requirements,
* use cases (UML diagrams),
* description of tools,
* methodology of design and implementation.

.

# External specification

This chapter contains following elements:

* hardware and software requirements,
* installation procedure,
* activation procedure,
* types of users,
* user manual,
* system administration,
* security issues,
* example of usage,
* working scenarios (with screenshots or output files).

The entire document should contain references to the illustrations contained therein (Fig. 4.1).

|  |
| --- |
|  |
| Fig.4.1. *The variation funkstioni* |

# Internal specification

This chapter contains following elements:

* concept of the system,
* system architecture,
* description of data structures (and data bases),
* components, modules, libraries, resume of important classes (if used),
* resume of important algorithms (if used),
* details of implementation of selected parts,
* applied design patterns,
* UML diagrams.

A short code insertion in the text line is possible, e.g. class Main. Longer fragments should be written in *Courier* or *Courier New* font size 10 in frames (Listing 4.1) with a space between the lines of the value 1. All lines of code should be numbered so that they can be referenced in the text of the document.

*Listing 1. Generating random numbers*

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17 | **package** polsl.iinf.lab;  **import** java.util.Random;  **public** **class** Main {  **public** **static** **void** main(String[] args) {  Random r = **new** Random();  // drawing a number from the range 1..10  **int** a = r.nextInt(10 + 1);  System.*out*.println(a);  // drawing a number from the range -5..15  System.*out*.println(r.nextInt(21) - 5);  }  } |

# Verification and validation

This chapter contains following elements:

* testing paradigm (eg. V model),
* test cases, testing scope (full / partial),
* detected and fixed bugs,
* results of experiments (optional).

# Conclusions

This chapter contains following elements:

* achieved results with regard to objectives of the thesis and requirements,
* path of further development (eg. functional extension . . . ),
* encountered difficulties and problems.

# Bibliography

|  |  |
| --- | --- |
| [1] | Name Surname, Name Surname. *Webpage title*. http://adres/w/sieci.html [access date: 2018-09-30]. |
| [2] | Name Surname, Name Surname. *Title of a book*. Publisher, Warsaw, 2017. |
| [3] | Name Surname, Name Surname. Title of an article in the journal. *Journal title*, 157(8):1092–1113, 2016. |
| [4] | Name Surname, Name Surname, Name Surname. Title of a conference article. In *Conference title*, pages 5346–5349, 2006.  . |

# List of abbreviations and symbols

|  |  |
| --- | --- |
| *DNA* | deoxyribonucleic acid |
| *MVC* | model–view–controller |
| *N* | cardinality of data set |

# Contents of attached CD-ROM

The thesis is accompanied by a CD-ROM containing:

* thesis (PDF file),
* source code of applications,

# List of Figures

# List of Tables