<Overtime>

Functional specification document<0.3>

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Document management

**Document history**

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| **Version** | **Status** | **Date** | **Responsibility** | **Reason for the change** |
| **0.1** | **Concept** | **24\04\2020** | **Felix Jopkiewicz,**  **Fabio Boran, Dejan Sunaric, Filip Josipovic** | **Creation 1. Draft** |
| **0.2** | **Finished** | **25\04\2020** | **Felix Jopkiewicz, Fabio Boran, Dejan Sunaric, Filip Josipovic** | **Finished functional specification document** |

**This document was created by using the following tools:**

<Functional specification document> Microsoft Word

<Website tool> HTML, CSS

<Programming platforms> Visual Studio, Notepad++

<Repository tool or Backup tool> Github

<Time scheduling tool> GanttProject

<Presentation tool> Microsoft PowerPoint

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# Introduction

## Purpose and validity of this document

*Goal of the document and address audience*

*For which application domain: The whole Project? Basic system? Delta- production?*

The goal of this document is to describe the used platforms and the background of the whole project

## The correlation with other documents

*The reference to other documents (spec. book, system specs.) Constructive? Part?*

There is a reference to the specification book, which was given to us by our employer.

# General specifications and limitations

## Purpose

*Aim and application of the products from the customers point of view*

Our customer does not just want to provide a save surrounding for the students who stay at the regular schooltime but also for more committed students, which stay in school after their regular classes

## Overviewing the functionalities

We are going to list the main performances, which are included by the system

(Summary of chapter 3)

If scheduled, also the schedule of the configuration level

As the case might be also the performance, which the system is not going to include.

It provides the students with the opportunity to stay longer after school and having the people of authority knowing so. Besides that, it will also provide the person responsible a good overview over the situation regarding student’s extra stay.

## Limitation and embed stations

Limitation regarding other systems in the surrounding.

Hard- and Software of the final system.

Regarding the platforms every member of project team Overtime is going to use:

Visual Studio, Notepad++, Microsoft 365, GanttProject and Github.

The following systems count as external systems:

The school server of *htl-donaustadt*, where our finished Website is going to be hosted. The Website is going to appear as a new option on the school’s official website.

## General guidelines and limitations

Guidelines for the Hardware, Software, interfaces, standards, methods.

* Software
  + Operating systems: Windows 10 64 bit
  + Platforms: Visual Studio, Notepad++, Microsoft 365
  + Coordination tools: Ganttproject
  + Repository tool: Github
* Hardware
  + CPU: Intel core i5 and better
  + Memory: 128 GB and more
  + Interface: USB
  + RAM: 8 GB
* Interfaces to other devices
  + Server of *htl-donaustadt*

## Requirement source and target audience

Users oft he wanted System

* Students
* Head of *htl-donaustadt* - mister Bonatz
* Housekeeper

Other Stakeholders

* Parents
* Mister Dassler
* Police/firefighters
* Teachers

# Detailed description of the performance features of the system

## Functional delivery contents

Description of the delivered main functions

* Variant 1
  + Login with an account (username and password). Username and Password correspond the same login data of the school (school mail and Moodle)
    - The student’s point of view
      * As a student you can access your account and sign in when he or she is going to do overtime on the same day.
      * If a student leaves school earlier than he or she claimed, then he or she must log in again and end the extra time at school.
      * He or she also has the opportunity to stay longer after the extra time if he or she wants to expand her extra stay at school.
      * If the set timer runs out by its own, then the person will not be displayed on the Overtime website anymore.
      * The entry can only be made on the same day, not before. There will be no option to sign in days before or to do advanced booking
  + Person of authority

The person of authority does not have to sign in but rather receive an online link from *htl-donaustadt*, which grants them access to an overview over the students who stay longer after school.

* Variant 2
  + In this case the login will take place on Moodle. By doing so we do automatically know that the person is a student of *htl-donaustadt*. There is going to be a link to the Overtime website on a general directory on moodle. In contrast to variant 1, you now enter your own name here instead of having already registered. All other functions are the same as for variant 1.
    - Disadvantage
      * You can now enter any name that does not have to correspond to your own. This can lead to incorrect information.

The person logging in can choose a random name.

* + - For persons of authority
      * There would be a link provided by *htl-donaustadt* leading to the Overtime website, just like in variant 1, because we rely on the teacher’s sanity to not publish this link. In case of that happening, due to not incomprehensible reasons, we can delete that specific link from the database, and it will not grant access anymore.

*Description of the delivered system components*

* Notepad++ files
  + Two HTML files of the backbone and the login website each.
  + Altogether three CSS files to give the raw HTML files a look.
  + One PHP file for the background programming
* Visual Studio
  + One SQL file for the general database

If there are configuration levels, then references to the conf. levels

## Interaction with the surrounding

Describing typical scenarios (procedures)

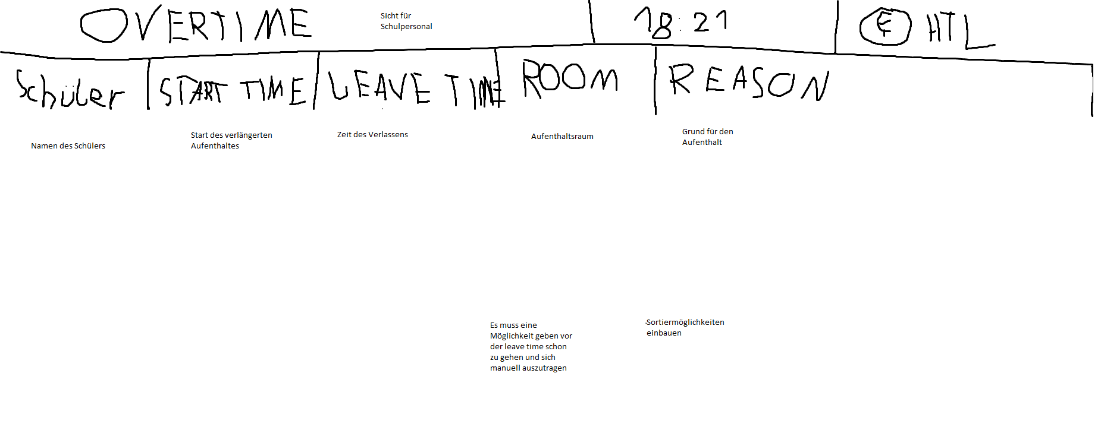
For example: case of application- diagram

* Variant 1
  + As an authority figure
    - First you click the link provided by the school and then you will be directed to the overview of all students which decided to stay longer after their regular classes
  + As a student
    - First you go to the login tab which you will be able to find on the website of *htl-donaustadt* and you log in. Next you will be led to your account, where you can determine if you want to stay longer after school, by writing down how long you will stay after school (start-time till end-time).
    - If you decide to leave school earlier than anticipated, then you must log in again and end your longer stay at school manually. If you leave school at the end of your longer stay, then you will be removed from the system automatically.
* Variant 2
  + As an authority figure
    - First you click the link provided by the school and then you will be directed to the overview of all students which decided to stay longer after their regular classes
  + As a student
    - First you will log in to *htl-donaustadt´s* moodle. There is going to be a link to the Overtime website on a general directory on moodle. In contrast to variant 1, you now enter your own name here instead of having already registered. All other functions are the same as for variant 1.

## The demanded functions

The product will be described from a functional view in cases of usage. Every case of use will be specified for example using a table.

|  |  |
| --- | --- |
| **Designate** | *Person of authority visits Overtime website* |
| **Summary** | *The person of authority will have an overview over every student that decided to stay longer after school.* |
| **Team/Member** | *Person of authority* |
| **Precondition** | *The website must be finished. The database must be finished. The programming must be finished.* |
| **Process description** | *The person of authority opens the Overtime website. Now the person of authority will see every student which decided to stay longer after school. (The website for an authority person will look like this. See picture below).* |
| **Usages (Include- Relations)** | *While the website opens for the person of authority, the data of the students, which decided to stay longer after school will be loaded for the website.* |
| **Extensions (Extend-Relations)** |  |
| **Alternative** |  |
| **Postconditions** | *If the Overtime website opens successfully, then the person of authority will have an overview over every student that decided to stay longer after school.* |
| **Failure** | *If we won´t be able to finish our project before the deadline, then we will at least try to provide the website for our own class.* |



|  |  |
| --- | --- |
| **Designation** | *Student logs in and determines how long he will stay after school / Variant 1* |
| **Summary** | *The student logs into the Overtime website and determines how long he will stay after school.* |
| **Team/member** | *Student* |
| **Precondition** | *The login website and the Overtime website must be finished* |
| **Process description** | *First you go to the login tab which you will be able to find on the website of htl-donaustadt and you log in. Next you will be led to your account, where you can determine if you want to stay longer after school, by writing down how long you will stay after school (start-time till end-time).* If you decide to leave school earlier than anticipated, then you must log in again and end your longer stay at school manually (If you leave school after the at the end of your longer stay then you will be removed from the system automatically). |
| **Usages (Include- Relations)** | *As the student opens the login website, the login website shows up. After the student logged in, the Overtime website opens.* |
| **Extensions (Extend-Relations)** |  |
| **Alternatives** |  |
| **Postconditions** | *If the student logs in successfully, he will be able to determine if he is going to stay longer after school. Now the person of authority will be able to see that that student stays longer after school.* |
| **Failure** | *If we won´t be able to finish our project before the deadline, then we will at least try to provide the website for our own class.* |

|  |  |
| --- | --- |
| **Designation** | *Student logs into moodle and determines how long he will stay after school / Variant 2* |
| **Summary** | *First the student logs into moodle and then visits the Overtime website threw a link and then determines how long he will stay after school.* |
| **Team/member** | *Student* |
| **Preconditions** | *Moodle must be online. The Overtime website must be finished.* |
| **Process description** | *First you will log in to htl-donaustadt´s moodle. There is going to be a link to the Overtime website on a general directory on moodle. In contrast to variant 1, you now enter your own name here instead of having already registered. All other functions are the same as for variant 1.* |
| **Usages (Include- Relations)** | *As the student opens the link for the Overtime website (the link for the overtime website is going to be on a general directory on moodle), the Overtime website opens up.* |
| **Extensions (Extend-Relations)** |  |
| **Alternatives** |  |
| **Postconditions** | *If the student logs into htl-donaustadt´s moodle successfully, he will be able to open the link for the Overtime website, where he can enter his name and determine if he will stay longer after school.* |
| **Failure** | *If we won´t be able to finish our project before the deadline, then we will at least try to provide the website for our own class.* |

## Structure and behavior

Description of the different static Structure features of the system (class-, packet-, component and allocation diagrams)

Describe the dynamic of the intern procedures and the interplay of the system parts (activity-. Sequence-, condition- and timing diagram)

## User interfaces

## *Description of the user interfaces- User-Interface-Concept*

User interface with a few buttons and text fields which perform a specific action.

## Database – interface

## *Description of the Database interfaces. ER- diagram*

Our Database will highly depend on the protection of data privacy. We do not know if we will be allowed to connect our login system with *htl-donaustadt´s* database, which contains usernames and passwords. If we will be allowed to connect our login system with *htl-donaustadt´s* database, then this would be our solution.

## Other interfaces

*Description other interfaces to Soft- and Hardware.*

* *htl-donaustadt´s* school server is an interface for our project because everything that is important for our finished project will be hosted there.
* If we will stick with variant 1, then *htl-donaustadt´s* website will be an interface for our project, because there will be an extra tab on the website, where students will be able to enter the website.
* If we will stick with variant 2, then *htl-donaustadt´s* moodle will be an interface for our project, because there is going to be a link on a general directory on *htl-donaustadt´s* moodle which leads to the Overtime website.

## Other developer orientated requirements

Specification of the requirements regarding performance, resources, safety (safety and security), data safety, portability, reliability, maintenance, reusability, serviceability, quality, considerable norms)

As already mentioned, the data and everything important will be hosted on *htl-donaustadt´s* school server, which is already protected from viruses and hackers.

# Employer's specifications for project execution

## Realization requirements

For example, information about the software to be used, hardware, development method, dates, purchased products.

For example, standard software, client's software, reused own software, operating systems,

Photoshop 5, Visual Studio 2017/2019, Notepad++, Lucid Chart, Laptop/PC, Microsoft Paint, Github, Microsoft 365, HTML, CSS, GanttProject

## A[cceptability](https://www.dict.cc/englisch-deutsch/acceptability.html) [standards](https://www.dict.cc/englisch-deutsch/standards.html) and [delivery](https://www.dict.cc/englisch-deutsch/delivery.html) [conditions](https://www.dict.cc/englisch-deutsch/conditions.html)

Conditions of the customer for acceptance: How? Which documents?

Delivery schedule with dates, form of deliveries.

Required documentation

All files (html Overtime website, html login website, all CSS files, php file...) will be on a USB-Stick.

## Warranty

Warranty period, scope of warranty, error reporting procedures,

Bug fixes take place over a period of one week.

# Obligations of the employer

E.g .: provided hardware / software, training of developers or client personnel, contact person, provision of rooms, data center, reaction times of the client to inquiries.

This link provides every information regarding the obligations of the client.

https://www.sozialministerium.at/dam/jcr:1fd1632b-8dd3-453f-9efc-e6988671c95c/AVB\_IT-Software\_28102019.pdf

# Literature

SYP textbook

# Terms and abbreviations

The definition of terms is particularly important because the functional specification document represents the common basis of understanding between the client and the contractor.

HTML = Hypertext Markup Language

CSS = Cascading Style Sheets

PHP = Hypertext Preprocessor

SQL = Structured Query Language

CPU = Central Processing Unit

USB = Universal Serial Bus

RAM = Random Access Memory

# Attachment

Relevant documents that provide additional information about the system to be created, e.g. Models, detailed specifications,