Documentation &

Project Diary

Innovation Lab 1

Year 2023

Project: Serious Game - Computer Science

Team: 18

1. General Information

**Project name:** Serious Game - Computer Science

**Supervisor:** Petz Markus

Innovation Lab 1, winter term 2023 / 24

**Project-Team:**

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**Game Name:** Escape The Code

**Management Summary of the Project**

A captivating Serious-Game designed to inspire and empower Students through immersive learning Experiences. Each of the various chapters will target different topics of computer science and the tasks will be based on riddles like in an escape room.

**Framework Conditions and Project Environment**

Environment: Unity, C#

Usability / Interfaces: 2.5D Game; Visual Studio – based UI

System environment: Windows 10+, Keyboard + Mouse

**Semester-Roadmap**

Innolab 1: Brainstorming, Learn Unity-Basics, Foundation and Concepts

Innolab 2: Prototype

Innolab 3: Playtests, Bugfixing, Finalizing

Workload: uncertain, starting a new project

**Collaboration & Tooling**

Collaboration: Git: <https://git.technikum-wien.at/>

Tooling: Planning-Tool in FH-Git, Live-Share?

1. **Brief Description of the Project**

Proposal / Expectations

Description:

Educational Escape Room Game in a fictival scenario set on the Donauinsel. Develop a

Game to help students understand the relations in computer science better.

Goals:

Develop a game usable for education purpose; Focus on MINT, more precisely informatics & IT

Gameplay

In "Escape the Code" Players embark on an exciting Journey to break free from the enigmatic "Donauinsel" while facing a series of intricate Challenges in the form of programming Puzzles. They begin their Adventure by delving into the World of "C# Programming", unlocking the Secrets of Coding. Next, they navigate through the Depths of "SQL Database Management", gaining insight into Data Manipulation. Finally, they explore the art of "HTML Front-End Scripting", mastering the creation of User Interfaces. As they progress, Players merge their newfound knowledge in an epic Culmination, using all these Skills to overcome a grand finale Challenge, ultimately securing their Escape from the “Donauinsel”.

Story

The Player is suddenly confronted by an AI with the unsettling revelation that they have been inexplicably transported to a mysterious Realm known as the „Donauinsel“ – a Place from which there seems to be no Escape unless they successfully conquer a Series of daunting Tasks and intricate Puzzles.

1. **Specification of the Solution**

*< Once the order has been clarified (pre-project phase), you start the project implementation. Create a specification of your solution parallel to the implementation of your project across the sprints!*

*Before each sprint, at least those details must be specified that you will implement in the next sprint. Use techniques such as writing epics & user stories and build a product backlog (use the course content from the course Agile Project Management).*

*For the specification, generally use visualization techniques that fit the task at hand. For example, in addition to the mockups and user stories, database diagrams, class diagrams, or sequence diagrams (representation of temporal processes) can also be useful.*

*Usually, you go from rough to detail. The structure of this section can be as follows:*

* *System environment: Describe the delimitation of the solution to be implemented (system boundaries)*
* *Features (functional requirements): All required solution properties - in the case of software usually the features or a description of these as user stories or similar)*
  + *Create screen mockups of all essential UI views!*
* *Interfaces: All relevant interfaces of your solution.*
* *Quality characteristics, technical requirements (non-functional requirements): performance, scalability, availability, usability, information on architecture and expandability, etc.*
* *Other "not clear at first glance" but essential solution features!*

*Agree with your supervisor how the specification should be structured!*

*Ask whenever you feel that there may be a misunderstanding, different expectations, or if you did not fully understand a requirement! >*

1. **Effort Estimation**

*< In InnoLab1: Try to estimate the effort for this semester intuitively or with a method you know.*

*In InnoLab 2 and InnoLab 3: Use the explained Delphi method to estimate the effort for this semester, write the results here in an explanatory manner and refer to the used Excel document. >*

1. **Delivery**

*< In this section you describe the scope of delivery of your solution and everything you need to pass it on to a customer or another software team (in practice this is often referred to as "hand-over to operations" when the solution enters the operational phase).*

* *Final solution or solution components including source code*
* *System architecture and data storage*
* *List of any required licenses and information about copyrights (e.g. if third-party software / frameworks or similar were used).*
* *Any hardware specifications*
* *Description of how to install your solution including a list of all components to be installed, installation procedures, migration of databases, etc.*

*The content of this section is mostly project-specific. Agree with your supervisor what exactly this section should contain! >*

1. **Our Project Diary**

*< This section should be a kind of diary in which you record “what happened in our team in the project”. Use photos from your meetings, take photos of any reflections from whiteboards. Take screenshots.*

*Describe in short text sections which problems there were, which challenges were solved, what was "cool" in the project, etc.*

*ATTENTION: Create this section continuously (!) Parallel to the project and not only at the end on the last evening before the project is submitted! This enables your supervisor to understand why something worked particularly well or not so well, why there was great progress or delays, etc.*

*In practice, such a diary is used as the basis for a project retrospective and team feedback rounds.*

*Tip: Meet each other at the end of the semester and let your project "pass in review" over a good project closing meal: This is a good opportunity to discuss what you have experienced again and for the future or what you have learned in the next semester and take the Innovation Lab with you! >*