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MarkX

2024

Contents

[Overall Introduction to Project 2](#_Toc180247848)

[Product Vision 2](#_Toc180247849)

[Features 3](#_Toc180247850)

[Personas 4](#_Toc180247851)

[What is a Persona? 4](#_Toc180247852)

[Persona 1: Michael 4](#_Toc180247853)

[Persona 2: Siobhan 5](#_Toc180247854)

[Persona 3: Anna 6](#_Toc180247855)

[Persona 4: Luke 7](#_Toc180247856)

[Scenarios 8](#_Toc180247857)

[What is a Scenario? 8](#_Toc180247858)

[Scenario 1: Michael 8](#_Toc180247859)

[Scenario 2: Siobhan 9](#_Toc180247860)

[Scenario 3: Anna 10](#_Toc180247861)

[Scenario 4: Luke 10](#_Toc180247862)

[User Stories 11](#_Toc180247863)

[What is a User Story? 11](#_Toc180247864)

[User Story 1 11](#_Toc180247865)

[User Story 2 11](#_Toc180247866)

[User Story 3 11](#_Toc180247867)

[User Story 4 11](#_Toc180247868)

[User Story 5 11](#_Toc180247869)

[User Story 6 11](#_Toc180247870)

[Prototype 12](#_Toc180247871)

[What is a Prototype? 12](#_Toc180247872)

[Tool used to create Prototype (say if you found it easy to use or not briefly!!!) 12](#_Toc180247873)

[URL or Screen Shots (not all some) 12](#_Toc180247874)

# Overall Introduction to Project

## Product Vision

FOR developers and content professionals WHO need an intuitive way to convert between text formats, MarkX IS A web-based formatted text conversion service THAT enables conversion while retaining the format, style, and metadata of the original document or text input while allowing copy-and-paste, file download, or printed output. UNLIKE command-line tools, like *Pandoc*, and Microsoft Word plug-ins, like *Writage*, OUR PRODUCT provides a user-friendly interface without the need to install additional software, reducing security risks, and allowing non-technical users to complete tasks quickly and efficiently with minimal overhead and seamless metadata integration.

Developers and content professionals will benefit from using MarkX as it simplifies the conversion of text between various formats while preserving critical elements such as formatting, style, and metadata. By offering a web-based platform, MarkX minimises security risks and allows for an efficient workflow for both technical and non-technical users. Unlike command-line tools and plug-ins, our product provides a hassle-free, intuitive interface that speeds up text conversion tasks without sacrificing computing resources and metadata.

# Features

# Personas

## What is a Persona?

A persona is an imagined user where you create a character portrait of a type of user that might use your product. Personas help you to imagine what these imaginary users may want to do with your software, how it might be used, and allows your team to empathise with them. User personas help you envisage difficulties that potential users might have in understanding and using product features. Additionally, scenarios can be derived from user personas, aiding product development.

## Persona 1: Michael

**A persona for a computing student utilising multiple operating systems**

**A person with a blue shirt

Description automatically generated**Michael, age 21, is a third-year student studying computing at SETU Waterford. He lives in Tramore, and commutes to college each day, spending his free time in the library. His father works as an account, and his mother looks after his two younger siblings, and neither have much technical expertise so his options for help are limited. While Michael previously worked in a small technology repair shop, he is focusing on education during his final year of college. This period working helped him immensely with his studies, as he earned real-world experience tinkering with a variety of devices.

Michael keeps up-to-date on the latest technology developments and is constantly trying out new software. As the latest software is released across a variety of operating systems, he rotates a selection of Linux distributions alongside Windows on his Lenovo laptop. Occasionally, he also uses a VMWare virtual machine to boot into MacOS for applications such as Preview, which is his favourite platform for editing PDFs. One major point of frustration throughout Michael’s day is staying on top of the variety of file formats he uses. He wants to be able to efficiently move his documents between systems, while keeping the essential formatting, such as headers, footers, indentations, and quote styling.

## Persona 2: Siobhan

**A persona for a senior developer managing complex database integrations**

A person smiling at the camera

Description automatically generatedSiobhan, age 33, is a senior developer at a small software firm in Waterford. Originally from Cork, she graduated with a bachelor’s degree in computer science from UCC in 2015. She left her job at a multinational social network in 2019 to take up her new junior developer role in Waterford, moving out of her family home. She found adjusting to the change difficult, but after a year found her strength in integrating database systems to the company’s variety of software products. When the pandemic hit, Siobhan began working from home. She preferred this, and following an employee vote, management decided to embrace fully-remote working.

In 2022, Siobhan was promoted to senior developer, and she is now the lead for database-related development. She is responsible for two other junior developers and is in constant communication with them and other managers. When she needs to relay database system messages to other developers, she is unable to copy-and-paste the messages directly into the communications platform, Slack, as it’s unable to recognise the format. The messages contain jumbled characters all around the important phrases. She is annoyed by this, as there isn’t an appropriate plug-in on Slack Marketplace and her team are spending increasing amounts of time manually editing text. Siobhan needs a way for herself and her team to copy-and-paste text from the database system directly into Slack, without the cumbersome need for editing.

## Persona 3: Anna

**A persona for a freelance content creator catering for diverse formatting needs**

A person taking a selfie

Description automatically generatedAnna, age 29, is a freelance content creator based in Wexford. She grew up in Galway and moved to Wexford after college to pursue a career in writing. She initially worked for a digital marketing agency before deciding to go freelance in 2021, seeking a flexible, work from home job after the birth of her first child. She writes blogs, articles, and marketing content for various small businesses and start-ups. With a degree in English literature from NUIG, she has always been passionate about writing, but her role requires more than content. She needs to deliver formatted, professional documents to her global clientele on a variety of platforms. Whether it’s writing long-form blogs, batches of social media posts, or product descriptions, Anna constantly switches between formats and styles to suit the client’s exacting needs.

Anna uses text formatting tools daily to ensure her content is consistent and professional. She needs a web application that allows her to quickly convert her Word files to different formats, like markdown, PDF, and HTML, without losing the integrity of her styling. Since many of her clients have specific formatting guidelines, she values tools that are flexible, easy-to-use, and don’t require her to tune. She is relatively tech-savvy, but prefers intuitive tools that don’t slow down her workflow. Anna’s goal is to spend less time formatting text and more time focusing on her family and writing, so she appreciates solutions that offer seamless conversion with minimal tweaking needed afterward.

## Persona 4: Luke

**A persona for a researcher focused on precise and efficient document formatting**

A person taking a selfie

Description automatically generatedLuke, age 42, is an organic chemistry researcher based in Dublin. He was born in Leitrim before moving to Dublin for university, where he completed a Master of Science at UCD. He spent several years working at a multinational agrochemical company before returning to academia to focus exclusively on his research. He works at a university, where his job involves writing research papers, grant proposals, and reports on various experiments that he oversees. Luke often collaborates with other universities, both nationally and internationally, meaning he deals with a lot of technical documents and scientific papers in different formats.

Luke uses text formatting tools to convert his markdown notes, written on Notion, into properly formatted Word documents, PDFs, and LaTeX files, depending on what’s needed. He’s comfortable with technology but doesn’t want to spend too much time adjusting document layouts, being solely focused on the quality of his documents. The ability to quickly format his work and switch between different file types is essential for him to meet deadlines.

As a detail-oriented person, Luke appreciates tools that allow him to maintain a consistent structure across different formats, especially when working with tables, graphs, and references. He works across a variety of devices, so he prefers web apps that are accessible from anywhere without a complex set-up. For Luke, reliability and precision are the most important factors in choosing a text formatting service.

# Scenarios

## What is a Scenario?

A scenario is a narrative that describes how a user, or group of users, might use a software system to do something that they want to do. Scenario descriptions are written in plain English with the goal of being easy to understand, and take a non-technical, non-structured approach.

## Scenario 1: Michael

**A scenario for a computing student utilising multiple operating systems**

As part of Michael’s Operating Systems module, he was asked by a lecturer to study the file system and commands of the Linux operating system. Michael decides to move to the Red Hat Enterprise Linux distribution for all of his computing needs at home in order to fully immerse himself in the operating system. As part of the move, he needs to find replacement software for some of his Windows applications. Microsoft Word is one of the key applications that he needs to find a replacement for, as all of his modules require the use of a text editor in some way.

Michael already has a licence for Word on Windows, but doesn’t see the point in purchasing another licence, at a significant cost, when he will only be using the application for a short period of time. He decides on the popular Linux-based OpenOffice, which provides a comparable experience to Word. Following installation, he decides to put the application to use and begins taking some notes as he navigates around the file system using commands in the shell. When Michael is finished studying for the day, he goes to save his work, but can’t find the .docx file format used by Word. After some online research, he realises that OpenOffice isn’t able to export as a .docx, instead using a proprietary .odf format.

Michael searches for an odf to docx converter on Google, finding a web application called MarkX. He doesn’t have any sensitive information in the document, so decides to upload the entire document to the service over using the locally-computed copy-and-paste option. After the progress bar fills, he clicks to download his file. Being thorough, Michael verifies that the document opens in Windows. He is satisfied that his lecturers will be able to open his future assignments.

## Scenario 2: Siobhan

**A scenario for a senior developer managing complex database integrations**

Siobhan is leading a project to integrate a new Customer Relationship Management (CRM) system with her company’s existing database. As the senior developer responsible for the database side of the project, she spends most of her time troubleshooting data import issues and overseeing her team of junior developers. While reviewing logs from an import, she encounters a critical SQL error that, if left unchecked, could require the database to be rebuilt at a great cost to the company. Siobhan attempts to share the error message with her team on Slack, but when she pastes it, the formatting is incoherent. Special characters fill the message, making it difficult to interpret.

As this is a recurring issue for Siobhan and her team, she has tried different methods to fix the problem. She’s experimented with pasting the message into a text editor first, but this doesn’t resolve the issue. The manual editing required to clean up the messages wastes time and hurts communication. Siobhan begins researching solutions online, looking for a way to eliminate the need for constant formatting fixes. After some searching, Siobhan finds a web application called MarkX which advertises the quick copy-and-paste formatting features she needs. She tests it on her next error message and is relieved when it works perfectly. She shares the link with her team, and they immediately bookmark the page.

## Scenario 3: Anna

**A scenario for a freelance content creator catering for diverse formatting needs**

Anna is working on a set of product descriptions for an e-commerce client who needs the content delivered in both Word and HTML formats. After completing the Word version, she needs to convert it into HTML while preserving the client’s specific styling, such as bold headings and custom bullet points. Anna understands the basic syntax of HTML, but isn’t confident enough to submit her code to a paying client. She tries using an online converter, but the formatting is messy, requiring lots of manual adjustments.

As the deadline approaches, Anna searches for a better solution. She considers hiring a freelance developer to do the work, but the cost is unsustainable. She finds MarkX, a web application that converts Word files to HTML while maintaining the formatting. She decides to copy-and-paste her descriptions from Word to the website’s text box. After a moment, her work appears in HTML. She uses her limited technology knowledge to put this in a .html file, then verifies the format in Chrome.

## Scenario 4: Luke

**A scenario for a researcher focused on precise and efficient document formatting**

Luke is preparing a research paper to submit to an international journal, which requires the document in both PDF and LaTeX formats. After writing the paper on Notion, an application which uses markdown format, he needs to quickly convert it into these formats while precisely keeping his graphs, tables, and references. He tries his usual command-line converter, Win2PDF, but notices that it doesn’t recognise some of the scientific symbols used in the paper.

Luke searches for a more reliable tool that can handle complex formatting without requiring manual adjustments and that recognises all of the Greek symbols used in organic chemistry. He finds a web application called MarkX that supports markdown conversion to both PDF and LaTeX, while keeping his formatting intact. Luke uploads his paper to the service, and after a moment, clicks to download his file.

# User Stories

## What is a User Story?

## User Story 1

## User Story 2

## User Story 3

## User Story 4

## User Story 5

## User Story 6

# Prototype

## What is a Prototype?

## Tool used to create Prototype (say if you found it easy to use or not briefly!!!)

## URL or Screen Shots (not all some)