# Project Brief

## Document Information

**Key:**

Previous Text

**New Text**

**Feedback**

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|---|---|
| **Project name:** | Typing Trainer |
| **Date:** | 28/01/21 |
| **Author:** | TeamSoftwareProject Group 8 |
| **Owner** | Jason Quinlan |
| **Document code:** | |
| **Version:** | 0.3 |

## Key Stakeholders

| Major Stakeholder | Notes |
|---|---|
| **Product Owner** | Jason Quinlan |
| **Developers** | Raffaele, Shane, Niamh, Cormac, Pavel |

## Notes

Our Typing Trainer will utilise Markov Chains to generate the sample text for users to practice on. This will allow them to practice their typing skills with word sets that are more likely to be experienced in practical use. Similar products use quotes and excerpts from text as their practice sets, which might not be representative of real life use. Our goal is to provide a complete user experience, with the ability to compare your stats against yourself, your friends, and the wider user base. Other competitors such as Type Racer or Keybr offer some of the functionality, but not all. Type Racer allows one to compete against their friends, but doesn't offer test sets that represent real life typing, while Keybr has the ability to generate representative practice sets, but lacks some of the competitive aspects we wish to include.

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| **Background:** | Initially we were interested in creating a highly interactive mobile application that processed user data and allowed users to compare their stats with their friends. We identified typing as an activity that is part of our day to day life, especially with remote learning, and decided to base the application around this. We reviewed our initial model and decided that a web based platform is more appropriate than mobile but kept with the idea of making it highly interactive and competitive. |
| **Main Goal:** | To create a web-based Typing Trainer that fills the gaps in current offerings such as stat comparison and diverse yet practical word sets which are split up into multiple categories. Options will include basic targeted letter sets for people learning to touch type. |
| **Desired Outcomes:** | The aim is to launch a fully interactive typing application that is able to support multiple concurrent users. |
| **Constraints and Assumptions:** | It will be run on Modern browsers (We lack the ability to test our code on legacy hardware and software).<br>7 week deadline.<br>Developers have other responsibilities - college and work.<br>Developers are comfortable with mySQL and Python 3.<br>Time must be dedicated to learning new frameworks.<br>Dependencies will be necessary, compatibility could be an issue |
| **Interfaces:** | None |
| **Project Approach:** | The project will be developed in house using Python web-frameworks such as Flask, with a SQL database. Testing will be done locally in hopes of launching it on an online web server. Figma will be used to create a prototype of the front end interfaces giving us a concrete design to aim towards. Developers have agreed to use the Google Python Style Guide as the common styling approach. Will set out weekly goals during meetings and keep everyone updated on progress through slack. |
| **Project Product Description:** | Typing Trainer using computer generated text to create naturalistic test sets. |

## Outline Business Case

The Typing Trainer aims to close the gap in the market offered by already established typing aids. It has been identified that other vendors lack a unified platform - some have realistic typing sets while others have an in-depth analysis/feedback system but there appears to be a scarcity of applications that offer a combination of all of the outlined functionality.

The benefits of this project would include an opportunity to centralise this functionality and allow users to improve their typing skills in a fun, responsive and interactive manner. A realistic and practical neuralistic text set will be generated meaning users have an opportunity to practice on text that is applicable in everyday life, from emails to college assignments.

Risks and dis-benefits include the highly competitive market. Typing aids are very common and take many forms from online educational standalone games, to full on dedicated platforms such as Keybr and Type Racer. Privacy is a paramount concern and great emphasis must be placed on the security of account information and user statistics. The costs would include hosting the application in the cloud and scaling performance to allow multiple concurrent users as the application gains popularity. Other risks include the tight 7 week time deadline with the possibility of delays in development.

## Project Objectives

| | Target | Tolerance |
|---|---|---|
| **Scope** | Markov chain to generate text,<br>Responsive interface to show typing progress,<br>Stored user accounts and typing statistics,<br>Statistic processing,<br>Visual prompts (highlighted words, graphs, progress charts etc),<br>Web based platform | Simple text sets,<br>Simple interface - only displays text with no visual cues,<br>Guest Users only, no friend networking<br>Statistics only for most recent run<br>-,<br>Offline prototype - site is not launched but fully functional otherwise |
| **Time** | 7 weeks | No tolerance |
| **Cost** | Cloud Hosting | Free tier cloud hosting |
| **Quality** | | |
| **Risks** | Requirements change<br>Size underestimate<br>Application security<br>Staff illness | Time constraints may not allow new requirements<br>-<br>Minimise functionality |
| **Benefits** | Implement all features discussed to a high standard<br>Familiarise ourselves with new technologies | Develop a working product |

## Project Management Team

| Role | Reports to | Appointee |
| --- | --- | --- |
| **Data Interpretation**<br>- **pymySQL for db interaction**<br>- **pyChart.JS for data visualisation**<br>- **Flask** | Product Owner | Shane |
| **Functionality**<br>- **Markov Generation**<br>- **Web Scraping** | Product Owner | Raffaele |
| **Database/Authentication**<br>- **mySQL**<br>- **Flask frameworks**<br>- **Password Hashing** | Product Owner | Pavel |
| **UI/UX**<br>- **Figma prototype** | Product Owner | Niamh |
| **Developer** | Product Owner | Cormac |

# MOSCOW prioritisation

| Must have | Should have | Could have | Will not have |
|---|---|---|---|
| Stored user accounts & statistics | Dark Mode | Alternate Keyboard layouts | Freemium Model - Purchasable Categories, Limited Energy/Plays |
| Visualisation of user statistics | Comparison with other users statistics | category usage breakdown | |
| Realistic text sets with different categories | | Account profile pictures | |
| Online matches | | Confirmation of registered emails | |
| Low latency for keyboard input | | | |
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