

Project Brief

Document Information

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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.

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:	<p>It will be run on Modern browsers (We lack the ability to test our code on legacy hardware and software).</p> <p>7 week deadline.</p> <p>Developers have other responsibilities - college and work.</p> <p>Developers are comfortable with MySQL and Python 3.</p> <p>Time must be dedicated to learning new frameworks.</p> <p>Dependencies will be necessary, compatibility could be an issue.</p>
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. We considered reformatting our code by taking an Object Oriented approach for ease of future development, however on further revision we decided against this as it would require too much change too far into the project.
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, Responsive interface to show typing progress, Stored user accounts and typing statistics, Statistic processing, Visual prompts (highlighted words, graphs, progress charts etc), Web based platform	Simple text sets, Simple interface - only displays text with no visual cues, Guest Users only, no friend networking Statistics only for most recent run , 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 Size underestimate Application security Staff illness	Time constraints may not allow new requirements - Minimise functionality
Benefits	Implement all features discussed to a high standard Familiarise ourselves with new technologies	Develop a working product

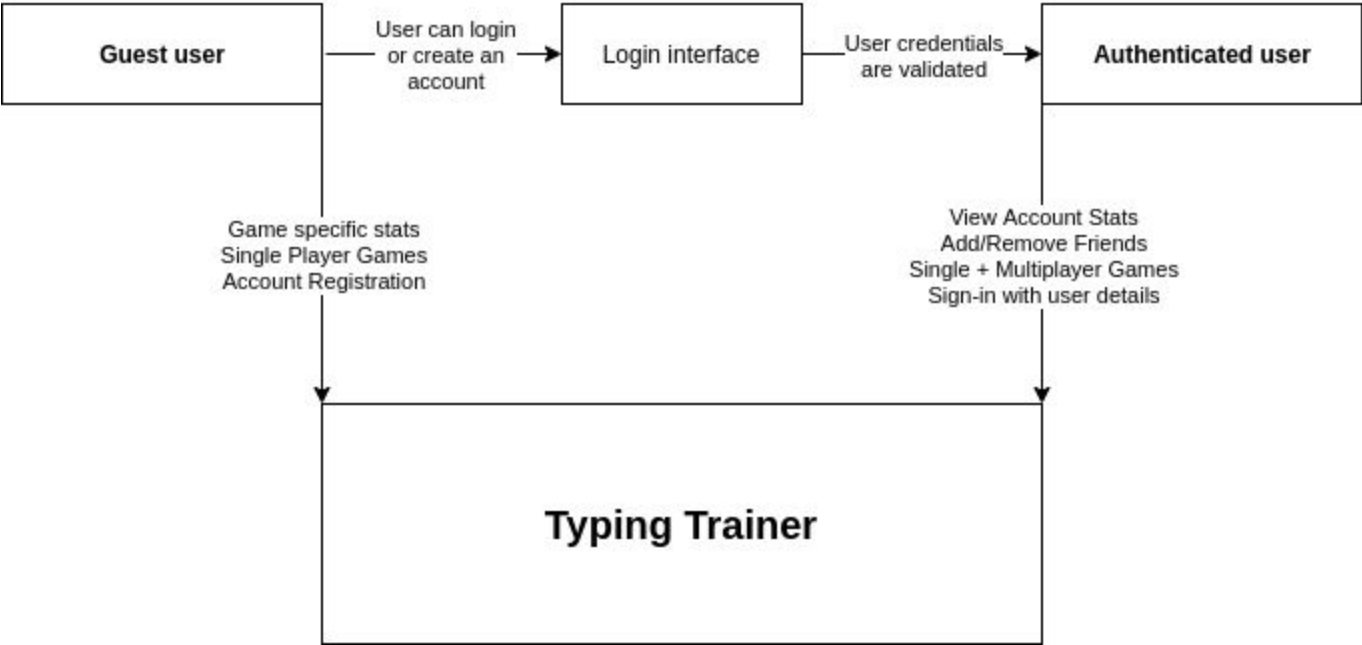
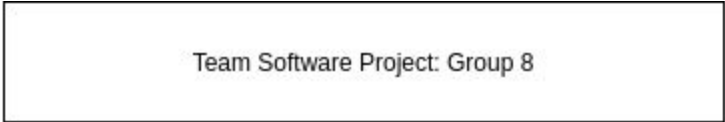
Project Management Team

Role	Reports to	Appointee
Data Interpretation <ul style="list-style-type: none">- pymySQL for db interaction- pyChart.JS for data visualisation- Flask	Product Owner	Shane
Functionality <ul style="list-style-type: none">- Markov Generation- Web Scraping	Product Owner	Raffaele
Database/Authentication <ul style="list-style-type: none">- mySQL- Flask frameworks- Password Hashing	Product Owner	Pavel
UI/UX <ul style="list-style-type: none">- Figma prototype	Product Owner	Niamh
Functionality <ul style="list-style-type: none">- Private Pages- User Profile Pages	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		Admin/Super-User Accounts	
		Social Media integration	

Architecture Diagrams:



Team Software Project: Group 8

