https://dle.plymouth.ac.uk/pluginfile.php/3242871/mod\_resource/content/0/COMP1004%20-%20Assessment.pdf

Backlog

* User stories
  + As a user, I want to be able to measure my typing speed in wpm (word per minute).
  + As a user, I want an option to stay logged in, so that I don’t have to enter my credentials every time.
  + As a user, I want to see an error message if I enter incorrect login.
  + As a user, I want to see my typing speed scores stored and displayed within a graph to be able to track my progress which is linked to my account.
  + As a user, I want to be able to have options of texts to test typing ability against. (e.g word vs paragraphs)
  + As a user, I want to be able to pick if the text I’m choosing to test against has punctuation or capital letters.
  + As a user, I want to be able to pick how long the typing test will be.
  + As a user, I want to be able to see a digital 2d keyboard lighting up and showing me the keys, I inputted.
  + As a user, I want to see which words/letter I’ve made a mistake on and the ability to change my mistakes during the test.

Using SCRUM SDLC – in first sprint, Creation of introduction + sdlc description -> start of initial sprint explanation -> planning phase + start of design phase.

* Make skeleton of code

**Introduction**

In this report, I will be describing the methodology of how I created my project; showing my planning, design of my coursework for the COMP1004 module. The project I've chosen is a single page web application of a typing test website, like available resources such as Monkeytype.com or typingtest.com.

**Software Development Lifecycle**

During this project, I am using the AGILE methodology, using the SCRUM model to achieve my project, having a scrum meeting at the beginning of every two weeks to outline what my aim is during the 2-week sprint.

In my first meeting, here is my objectives:

Meeting - 1/11/2023, 10:20-10:25

* Skeleton outline of webpage
  + A place to write and display words for them to write
  + Put html learning in practice – is current blocker; Mozilla html for help
* Finish introduction
* Use notepad++ and open document with chrome
* Write project vision

**Script**

**Project View/Background**

so why did I pick this project? Firstly, I have my own personal goal to increase my own typing speed showing my interest. More importantly, within the digital age, having a high typing speed is often an overlooked skill as having this skill directly impact the efficiency of doing of many modern jobs. As a result, employers would like their employees to have theses skills. Meaning, my project would be a useful tool for the employer to use to get accurate representation of job seekers’ typing speed. In addition, it can become a useful platform for job seekers to train their skills.

Proficient typing can also improve seamless collaboration as team members are able to articulate their thoughts and ideas effectively quickly and proficiently, a vital skill within the workplace.

As a result, my program intends to be used by employers to be test their typing ability, finding out their average WPM and their accuracy.

Privacy concerns would be an issue if the scale of my project goes further than a Uni project, although the main concern would be the protection against the username and password data.

Accessibility concerns based on input methods go out of the scope of my current abilities plus out of the scope of aim, particularly as its for keyboard typing specifically

**Sprints**

* In my first sprint, beginning at early December, I began to design my website.
* This entailed creating my user stores, separating them from basic functionality of my project and functionality to add to improve the user experience.
  + **User stories (SHOW USERS TORIES)**
    - This led to me having five or so features I want to include if I can
    - Primarily, ill want to get the basic features of a typing test completed, so having a timer and getting the words completed during that time.
    - However, I would like to improve the user experience by having adjustment options, changing the difficulty of the test i.e if simple words or full sentences with punctuation and the how long the timer is.
    - Another way I plan improve user experience is by clearly showing the error as you write them, in a bold red text and green for correct inputs.
    - A final thing, for it to be effective as a learning platform, I would like to implement a graph to show the average of your WPM.
    - To implement this, an account system would need to be added as consequence as graph data will have to be linked to each individual user.
* Later in the project, I may introduce new user stories ifI feel I could add more to my program.
* From there, I design my project through the use of flowchart and ULM diagrams of what my project could look like if I fulfill the basic functionality, on the second sprint during Christmas holidays, theses were used to implement the basic functionality and I amended them as I went if any logic errors occurred.
* I will go into the logic of the flowchart in a later slide, which also shows the ULM diagram.
* **Wireframe (SHOW WIREFRAME)**
  + Also within the first sprint, using Figma, I created a simple initial wireframe of what I would ideally like my website to look like. As you’ll see, it currently looks different. As I have not yet spent the time to try to adhere to the wireframe, there has been only one iteration thus far.
  + My only concern with it is the log in button, as the way its set up on the wireframe implies it may lead the project to no longer be a single page web application, so that’ll be a future challenge to consider.
* In my next sprint, I intend to design a new flowchart and ULM diagram to show the potential functionality of the new features and greater polish I intend to do.
* In particular, I intend to start changing the UI and implement the wireframe as initially intended as well as displaying the WPM and timer in a user-friendly manner, on the website itself instead using the developer console. In addition to randomize the necessary input values from the array and ensuring on submit its auto delete in the input box for a easier user experience.
* In addition, I intend to do proper testing for each and every feature current and future features implemented.
* In my next sprint, im going to be working on the next iteration of my project, in particular trying to implement the ui from my wireframe and polishing off features from my sprint to improve user experience, an example would be printing the WPM on the website instead of within the console. I will also be trying to introduce new features such as creating a pseudo-random array generator so needed inputs aren’t always the same.

**Flowchart logic**

* Okay, lets get onto the flowchart. It initialized the variable “completedwords” to zero which will be our counter for every correct word inputted, while at this stage it does not pseudo randomize array, that is an intended feature at a later date.
* It will then check if the input box is empty, because If It’s not longer empty that means the test has began.
* -This begins the stopwatch, it will continuously check if the timer is less minute, if it will check if the current value in input box is the correct value, if it is, completed words is incremented and the array is updated without the inputted value and redisplayed.
* This will continue until the stopwatch reaches 60s, and output the number of words wrote in that minute for WPM.

**Here what it looks like in action: (PROTOTYPE SHOWN)**

**Challenges**

* I’m a beginner at HTML, JavaScript and CSS thus making these simple functionalities have taken longer than I would have liked.
  + In particular, JavaScript has been the main problem. I am familiar with the main programming concepts such as Iteration, selection and sequencing but combining it with HTML effectively has been a challenge. This is primarily because of the lack of debugging tool within Notepad++. While there is an option within the developer tools, compared to visual studio, its far more limited in my opinion.
  + As a result of this struggle, validation of timer and timer has been a struggle.
* Time management has been a particular issue as I’ve had other projects to do as well, often leaving this to last to do due to how far away the final submission is.