Occupational Specialism

Task 2 Development

Contents

[Task 2: Designing the solution 1](#_Toc103243089)

[Introduction 1](#_Toc103243090)

[My proposed solution 2](#_Toc103243091)

[Functional and non-functional Requirements 3](#_Toc103243092)

[Functional 3](#_Toc103243093)

[Justification 3](#_Toc103243094)

[Non-Functional Requirements: 3](#_Toc103243095)

[Data Requirements 4](#_Toc103243096)

[Decomposition of problems 4](#_Toc103243097)

[Design 5](#_Toc103243098)

[Automated testing 7](#_Toc103243099)

[Sprint 1 7](#_Toc103243100)

[Design 7](#_Toc103243101)

[Development 8](#_Toc103243102)

[Review 9](#_Toc103243103)

[Sprint 2 9](#_Toc103243104)

[Design 9](#_Toc103243105)

[Development 10](#_Toc103243106)

[Review 10](#_Toc103243107)

[Sprint 3 10](#_Toc103243108)

[Review 10](#_Toc103243109)

[Review of product 10](#_Toc103243110)

[Improvements 10](#_Toc103243111)

# Task 2: Designing the solution

## Introduction

**Set task brief:**

The software development company you work for has secured a new contract to develop a digital solution for GibJohn Tutoring.

* GibJohn tutoring currently provides customers with:
* Face-to-face tutoring sessions
* Access to learning resources
* Support to develop understanding in different subjects

The client (owners of GibJohn Tutoring) would like to develop a digital solution that will:

* Provide interactive teaching and learning resources in a range of subjects
* Provide access to digital content to encourage wider learning
* Support and monitoring of learner progress.

The client has carried out some market research with existing customers and tutors to identify features that could be included in the digital solution. The potential features suggested by the client are:

* Collaborative teaching and learning tools
* Accessibility features to support a wide range of users
* A learning reward system
* Gamified learning

## My proposed solution

I have been asked to create a solution that will meet the client’s needs.

For my proposed solution I will be designing a website, that will be able to provide access to digital content to encourage wider learning, give support to develop understanding in different subjects.

I will also be implementing a live chat feature where can you speak to a tutor for any advice and help that you may need.

•To make the website I will be coding in HTML and JavaScript to implement some dynamic features on the page.

To include all users, I will be trying my best to focus on making the website as accessible as I can, this could range to a magnifier to enlarge the text on the screen all the way to colour blind settings.

Requirements:

* Live chat
* support to develop understanding in different subjects
* access to digital content
* Accessibility settings

To ensure that I will have enough time to fully develop the project I will be using a method called agile, agile uses sprints which is the bare minimum requirements needed for a working project, each sprint from then on will add more features working on the existing foundations.

If I am ahead of schedule I will attempt to add a way to talk face-to-face with a tutor using something

I will be splitting the project into 3 separate sprints, each focusing on their own aspects of the webpage, sprint 1 will be focusing on the main requirements of the webpage, however, will be the bare minimum as the other sprints will improve on the foundation.

I will be planning to use **HTML** to create the webserver to add some dynamic features to the page such as parallax text I will be implementing some JavaScript into it.

I will also be using **CSS** which is a stylesheet (to make the page look nice)

## Functional and non-functional Requirements

### Functional

|  |  |  |  |
| --- | --- | --- | --- |
| # | Requirements | How will I accomplish? | Acceptance |
| 1 | Website displays relevant information | Using HTML and JavaScript i will make a website | When i click load on the website it will open and allow me to access the website as a whole |
| 2 | Authentication of a user when he/she tries to log into the system. |  |  |
| 3 | Live chat |  |  |
| 4 | Support to develop understanding in different subjects |  |  |
| 5 | Accessibility settings |  |  |
| 6 | Access to digital content |  |  |

### Justification

|  |  |  |
| --- | --- | --- |
| **Requirements** | **How will I accomplish** | **Acceptance** |
| **Create useable website** | **Using HTML and JavaScript I will make a website** | **When I click load on the website it will open and allow me to access the website as a whole** |

### Non-Functional Requirements:

* The program can run.
* The program loads every time.
* Updated quickly.
* The program runs effectively.
* It performs well under stress.
* Updated security to protect users.
* No bugs/errors or very little on release.

## Data Requirements

The following data types will be used:

• Strings: used to store information such as login credentials, passwords, emails, and other text-related data.

• Floats: utilised to store decimal numbers, such as cash, because they are not whole numbers.

• Boolean: true or false to allow data to flow in and out at different times. Incorrect passwords, for example.

## Decomposition of problems

Problem 1 – make a system that can provided learning resources to the client

• Provide learning resources

• Fetch information.

• Display information.

## Design

I have made a quick wireframe outlining key aspects of the main page for the website, along top will be the navigation bar. This will contain a series of buttons one being a drop down to add some dynamic features to the webpage, in the top left corner will be the logo of the company.

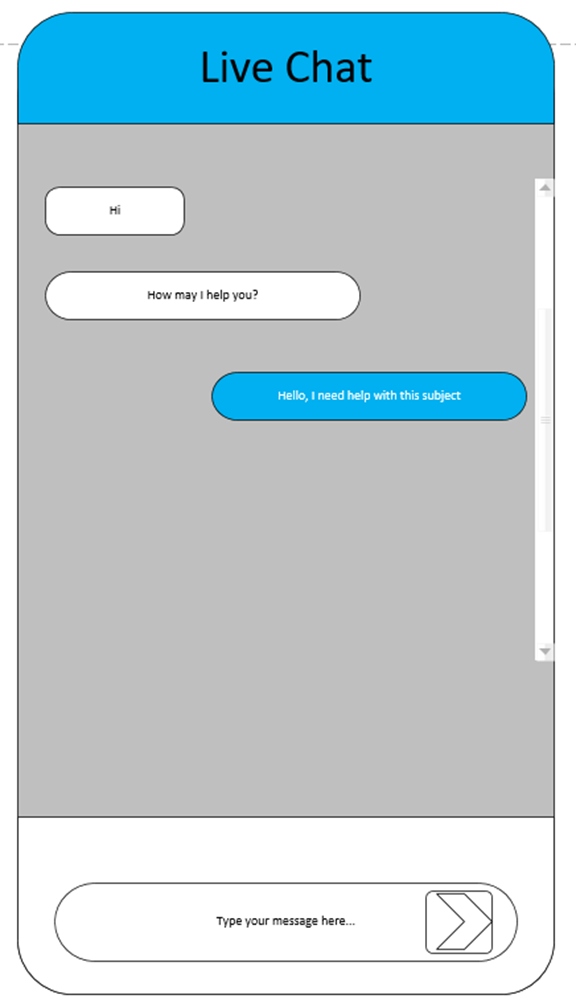
In the top right I have added a magnifying glass to enable users with visual difficulties to increase the size of the font on the page, next to it is the settings button that will drop down allowing you to customise the page. This will include a dark mode and colour-blind setting.

Graphical user interface, application

Description automatically generated

Initially i thought of having a pop outside navigation bar using JavaScript, however I thought the overall design would be taken up by the side navigation bar and have decided to go for the standard type of navigation bar whilst still including some JavaScript within the top nav bar.

I have decided to add some buttons in the middle of the page that will take you to different subjects that you can choose from however this may change soon.

Table

Description automatically generated

I have included a search bar so you can quickly and easily find what lesson you are looking for.

In the bottom right will be the button to contact the live chat, I have designed a quick wireframe for the design of the chat.

## Automated testing

Real users and manual testing aren't usually required. Stability and non-regression tests, as well as those performed with each new feature or modification, are examples of repetitive tests that can be automated.

• Reduce costs by lowering the amount of work that must be done manually.

• Make the most of your testing efforts.

• With a simple click, you can run dozens of tests to increase your coverage.

## Sprint 1

### Design

For my landing page of the website, I have gone for a dark theme as many students tend to be studying during the night and having a very bright background could strain their eyes. However, I will be adding a colour-blind setting or an ability to customise the colour scheme of the page.

I have decided to implement an album style for the cards that will display all the lessons.

Graphical user interface

Description automatically generated with medium confidenceI feel it looks the cleanest and very sleek, whilst displaying all the relevant information whilst not being confusing

Instead of having a navigation bar like you would see on most websites I have decided to go for a drop-down menu that will give you access to some information about the company, settings menu to add colour blind settings, and some contact information for the company.

Shape

Description automatically generated with medium confidence

To do this I used some JavaScript to add the drop-down animation to the page

### Development

Graphical user interface, text, application, chat or text message

Description automatically generatedI am planning to add a live chat feature that will allow a user to communicate with one of the tutors that is available, they will be able to ask questions and hopefully receive the answer they are looking for.

This is the design for the live chat I have come up with. You will be able to choose which type of messenger you would like to use to talk to the tutor.

### Review

Overall, for sprint 1 I could have simplified it much more saving me more time for the other sprints however I am very pleased with the overall modern and sleek design of the page so far.

The use of the live chat box will improve the user experience drastically.

The use of the dropdown menu will also add some much-needed dynamic features to the page to keep the user’s attention.

I also feel that I have kept closely to my original wireframe but with slight tweaks due to the limitations of coding in html as it can be quite finicky at points especially with correct placements of boxes.

## Sprint 2

### Design

In sprint 2 I have refined the album style cards and have added their corresponding images and their text detailing which subject they can view

Logo, company name

Description automatically generated

### Development

I have ensured that the website is responsive meaning if you have a smaller screened device the page will automatically adjust to the correct size allowing you to still access the entirety of the page.

Graphical user interface, application, website

Description automatically generated

Here is how it would look on a mobile device.

This is a very important feature as some students/clients could not have access to a desktop and rely on their phones for most of their work. Allowing the inclusion of everyone.

This also allows for the ability to study whilst on the go since it has mobile support implemented.

Graphical user interface, text, application, chat or text message

Description automatically generated

### Review

## Sprint 3

### Review

## Review of product

## Improvements