**3.Aims**

The objective of this project is to provide a website that acts as a ‘guide’ for the first-year students of UON. This is so that they can obtain useful information about basic university services and make the transition to the university life as smooth as possible.

The website will be a portal website that focuses on sharing school information. This type of website focuses on specific users (first year students).

The major goals for the project will be to:

1. Provide a simple and easy-to-use user interface prototype

We will discuss and design a preliminary web UI draft based on the design principles of simplicity, easy-to-use, and interactivity. At this stage, we will also select testers to test our user interface prototype, so as to be more efficient in future web development.

1. Collect the information needed by the orientation website

To create a website that meets your needs, you must collect enough, useful, and up-to-date information. It includes basic university service information, colleges and courses, preparations for university, scholarships and other information.

1. Use HTML5 to create the basic structure of a web page

We use Visual Studio Code to create our website, we will use HTML5 to design the basic structure of the website and realize its basic information-providing function.

1. Use CSS3 to make web pages and UI consistent

We will design the style and appearance of the web page based on the user interface prototype to ensure that the web page and the UI are consistent. Here, in order to comply with the principles of web development, we will use an external style sheet to separate the structure from the style.

1. Mix text and multimedia (charts, graphics, photos, videos)

We will use text, charts, pictures, videos and other mixed text and multimedia on the web page to show users various basic information of the university.

1. Use JavaScript to make the website look professional and easy to use and enhance the interaction with users

We will use JS to increase the interactivity between web pages and users. Similarly, we will follow the principles of Progressive enhancement and Graceful degradation.

1. Create a good user experience for 1st year student

We will conduct various discussions to improve the style and behavior of our web pages to enhance the user experience.

1. Create an SQL database to store information

We use Microsoft SQL Server Management Studio to store information, In order to obtain a well-structured database, we follow the database design process to standardize and ensure data integrity.

1. Linking our database and website

Connect to the database so that the website can update information.

1. Debugging and Testing Webpage

We will continuously get user tests from peers to gather feedback on usability and debug any issues found in the website.

**4.Methods**

* 1. **Make user interface prototype and test**

After discussion in the group meeting, we used a hand-drawn form to draw a draft of the user interface on paper. These user interfaces will refer to some well-known website design styles, so that the page layout, components, and styles conform to the public's aesthetics. After the prototype is completed, we will choose some friends as testers. In a face-to-face format, give them pictures of the user interface and ask the tester if they are used to and like the interface design. Record possible problems, and then improve the UI based on feedback from testers. We follow the tester rules, and the tester can reject or stop the test under any circumstances.

**4.2 Collect information from the university's official website and student feedback**

We will conduct a simple online survey to find out what the freshmen most want to know and what information they need most. Secondly, we will browse the official website of the university, summarize and obtain the most important information on the official website, such as basic university service information, what is a typical semester, ‘before the UON’ to do list, scholarships, FAQs, etc. This information is very important for us to build an excellent orientation website. To meet the needs of users, it is vital to know what information they need.

* 1. **Build the structure of the web page**

We will use Html5 to establish the basic structure of the web page, which is a crucial step. The structural layer is equivalent to the skeleton of a web page and is the foundation of an excellent website. We will use the lightweight editor Visual studio code to make the basic web page structure. At this stage, we will not consider the style and behavior of the web page, we will focus our work on the content of the information. When we need to use some new html tags, we will consult the html dictionary of W3Cschool. After this stage is completed, the most basic functions of the website will be completed. Users can find all kinds of information they want on it. Of course, the web page at this time only has a basic structure to provide information, and does not have a good-looking user interface and good interactivity.

**4.4 Add style to webpage**

At this stage, we will add a presentation layer to the web page based on the previously designed and determined user interface prototype. Our goal is to align the style of the web page with the user interface prototype. We will use an external style sheet (so that the structural layer and the presentation layer are separated) to change the style of the website. Similarly, we will look up the css dictionary of W3cschool to use the new css attributes. At this stage, we are mainly for page layout. Therefore, it is very important to master the box model, floating, and positioning. After this stage is completed, the style of the website will be basically consistent with the UI, and in the follow-up discussion and testing, we will further improve the style of the page to meet the user experience.

**4.5** **Mix text and multimedia**

At this stage, we will further make our website look more beautiful. Since we have members with professional background in media, we can use multimedia software such as PS, PR to make suitable pictures and short videos and apply them on the website. At this time, we will also consider the font, size, and layout of the website text.

**4.6 Add a behavior layer to the website to enhance interactivity**

We will continue to work on the lightweight editor Visual studio code, at this time we will add a behavior layer to the orientation website. The purpose of using JS to add behavior is to enhance interactivity and enhance user experience. Therefore, it is very important to master the basic knowledge of JS objects, functions, prototypes, and the direction of this. For development efficiency, we will also learn the framework method of vue. After this stage is completed, the web page will look more professional and there will be good interaction between the user and the web page.

**4.7 A good user experience**

We follow the scientific method of web development. Like external style sheets, we will create external js files and then introduce links to external js files in html. In this way, the structure layer, presentation layer, and behavior layer of the website will be separated, satisfying the design concept of Progressive enhancement and Graceful degradation. The purpose of this design is to consider that users can also normally obtain web page information in a network environment with unstable or high latency. For example, if the latency is high or js is disabled by default in the browser, js and css will not be loaded, and the web page can still provide users with basic structural information. At this stage, we will discuss what styles and behaviors can enhance the user experience. We will refer to a large number of well-known websites and learn the styles and behaviors they use in web design. Vote in group meetings to determine and retain the styles and behaviors with the highest votes to improve our website.

**4.8 Create an SQL database to store information and link our database and website**

At this stage, we have designed a web page that satisfies the user experience, in order to achieve more functions such as website information updates. The team will need to develop a database that will store and organize the input of student information for the website to output useful information to students. For example, information about important faculty and staff in the selected subject, contact information, etc. We will use SQL server management studio to manage the database creation. Our interactive code using JavaScript will communicate with SQL to retrieve and upload data from the database in response to user requests. At this stage, we will:

1. Perform a requirement analysis on the data to find out entity relationships and attributes.

2. Design the EER diagram, standardize each table, delete redundant data according to the relational model, and ensure the integrity and accuracy of the data.

3. Develop a draft of the physical database.

4. Test and deploy the database.

5. Database connection.

**4.9 Debugging and Testing Webpage**

After the website and database are fully completed, the team will continue to obtain user tests from testers to collect available feedback and debug any problems found in the software. At this stage, we will carry out the following activities:

1. We will select a certain user to be the tester, and compile a question form, and ask the user the operations that need to be performed on the question form to find the school you want. Search for a school. Record the tester's actions, and ask the tester if there are any suggestions for improvement, and finally let the tester rate the user experience. A total of five stars are scored, and each star corresponds to a different level of user experience description.

2. Modify our website according to the tester’s question feedback form. Our team will absorb user’s suggestions and ratings, and discuss the improvement and UI of the website. Finally, we will re-improve the website through the success of the group discussion, and then deploy and test.

**5.Results**