Task 1 (Summer 24) proposal

In this proposal, I will discuss the solution that I will be proposing to meet the needs of the client (Riget Zoo Adventures) and existing and potential users and why

Proposal contents

Scenario

Riget Zoo Adventures (RZA) is a local attraction that offers a safari-style wildlife zoo, an on-site hotel and educational visits. The client would like to develop a digital solution that will provide customers with help and information about the attractions and facilities, provide materials to support educational visits and allow customers to reserve and book tickets for the zoo and check availability and book a stay at the hotel. The client also carried out some market research with existing customers to identify features that could be included in the digital solution and the features suggested by the client were account registration to allow customers to manage their bookings, accessibility features to support a wide range of users and a loyalty and reward scheme.

Business context

In the context of the business, this is a local attraction with a zoo, on-site hotel and educational visits. Similar businesses like this tend to have a website to give information to anyone who wants to find out more about who they are and what they do and their websites are also available on all devices, including mobile phones and laptops. They also have accessibility features to support people who may be impaired and to assist those who are visiting the zoo to ensure that they know how to get everything they need. Businesses like this have a target audience of children which would include infants as well, so they would be family-friendly with the content of their websites and their look. Additionally, these businesses also have excellent security in their websites to ensure that people are safe when they are on it, especially when registering and logging in and that the websites aren't susceptible to being hacked or other malicious activity.

I will also incorporate the same features above in my digital solution in the form of a website which will have similar content as other zoo websites and my solution will also be accessible for those who are impaired. The website I will be designing will have images and colour in it so that it meets the appropriate target audience. I will also make my website secure like other similar websites have to protect the users when they log in and register by implementing the necessary features such as password and using HTTPS to ensure protection from hackers and other malicious users.

Proposed solution

The digital solution that I will be proposing for Riget Zoo Adventures and existing and potential users will be a website that can be accessed on a laptop and a mobile phone. The website will have all of the features that the client and users have asked for. The website will have all of the functionality that is needed for the client and users to be able to use the site

and this will include the ability for the users to get help and information about the attractions and facilities, materials provided to support educational visits along with being able to reserve and book tickets for the zoo and check for any availability and book a stay at the hotel. I will also incorporate most of the features suggested by the client which are account registration to allow customers to manage their bookings and accessibility features to support a wide range of users.

For the digital solution that the client would like to develop, the website will be about Riget Zoo Adventures and will have pages containing the relevant information about the local attraction which has been mentioned by the clients such as the zoo and the hotel etc. There will be a home page for Riget Zoo Adventures which will be a welcome page for the users where they can see a brief description about the local attraction. The home page will also have a background image along with some images below the description itself to give the users an idea as to what the website is about and to make the website stand out more. Along with this, there will be another page which will give information about Riget Zoo Adventures in more detail to help the users understand more about the local attraction, though this page will just be for the users to know all about Riget Zoo Adventures and what they do. The website will then have another page where the contact information for Riget Zoo Adventures can be found and it will have their email address, phone number and address for any user who wants to get in touch with the local attraction in case of any queries. Additionally, there will be a page providing users with information about the attractions and facilities of Riget Zoo Adventures and how to get help if the users are unsure of any of these attractions and facilities by telling them what they should do if they may not understand something when looking at the information of the attractions and facilities. There will also be a page containing materials to support educational visits for users who want to visit Riget Zoo Adventures as part of their education and the materials will consist of example links to sources that contain information to support visits for educational purposes. There will be another page where the users can find the tickets to the zoo and they can reserve and book these tickets if they want to visit. Lastly, there will be a page for the users to check if there is any availability at the on-site hotel and book a stay at the hotel if they want.

The website will also contain most of the features suggested by the client which are account registration to allow customers to manage their bookings and accessibility features to support a wide range of users. There will be a page where users can log in if they already have an account and a registration page for users to register if they don't have an account. When a user has registered, they will be able to reserve and book tickets for the zoo and check availability and book a stay at the hotel as pages will be restricted only to registered users. Users who register will also be able to manage their bookings. There will also be a page where users can view the accessibility features for the website based on their needs depending on if they are visually impaired, colour blind etc and they can adjust these features based on their preferences so that the website can assist with their needs.

The website will have images to make it look more better in terms of its look and to help users understand what the website is about. Using images can also help attract them to the website and catch their eye as well. Each of the pages on the website will have a background image along with some images below the description which will be relevant to the context of

a zoo. There will also be a colour scheme used for the website to further improve the look of the website and there will be a logo image for Riget Zoo Adventures used for the home page on the navigation bar and when users click on this logo image, they will be taken to the home page. The images used on the website will be copyright-free from a free images source called Unsplash. Using free images with no copyright is important as it ensures that the website is complying with the legal requirements and following the laws in relation to copyright and that the images don't belong to anyone else.

For the back-end, there will be a database which will contain the data of the users who have logged in to the website and it will consist of the user's ID, name, email and password. These details will be passed to the database when a new user registers on the website if they don't have an account so that when the user logs in with their name, email and password when they registered, the database will remember their details and the website will log them in after validating their identity and rejecting them from logging in if their details are incorrect.

Along with this, the passwords in the database will be hashed to prevent the actual password from being known and aiding with the overall security of the database as encryption can help in preventing any unauthorised access to the data as passwords are generally considered to be sensitive and personal to the user. There will also be a database containing data for the ticket bookings made by the users for the zoo and it will consist of the booking details such as the ID of the booking, time and date. These details will be passed to the database when a user makes a booking for a ticket so that the staff can see how many users have made a booking for the zoo and it can also help in understanding the number of people who will be going to the zoo. It will also ensure that each of the users visiting are provided with help and information to assist with their visit.

Additionally, there will also be a database which will contain the data of the booked stays at the hotel and this database will consist of the booking ID, date of the stay including check-in and checkout, room number and user's ID, name, email and password. These details will be passed to the database when a user books a stay at the hotel and the purpose of having this database will be to keep a record of how many hotel bookings have been made. Also, this database can be used to link the user to the database with the bookings as the bookings will contain the user's ID and their ID will also be in the database containing the users. This can make it easier for the hotel to give rooms out accordingly based on the number of bookings made.

Functional requirements

Functional requirements refer to the requirements for the user. Below is the table containing each of the functional requirements, their priority and justification:

Description	Priority	Justification
The user can access all of the pages in the correct place	HIGH	The user will need to be able to understand and read the information correctly in their respective places. If certain pages aren't in the correct place, it could cause issues with the user not being able to find it or reading the wrong information
The user can log in to the website if they already have an account	LOW	The user will need to be able to log in if they want to reserve and book tickets for the zoo or check availability and book a stay at the hotel as these will only be restricted to only registered users. They will also need to be registered to manage their bookings
The user can register if they don't have an account	MEDIUM	The user will need to have an account to log in, so they will need to be able to register first before doing this. They will also need to have account registration to manage their bookings and to also reserve and book tickets or check availability and book a stay at the hotel
The user can access all of the pages without any bugs or other issues	HIGH	The user will need to be able to access all of the pages without any errors preventing this happening and the website will need to work as intended for this
The user can reserve and book tickets for the zoo without any issues	LOW	The user will need to be able to reserve and book tickets to the zoo without any errors preventing this from happening so that the booking system works as intended. The user will also need to be able to view the bookings that they have made
The user can check availability and book a stay at the hotel	LOW	The user will need to be able to check availability and book a stay at the hotel without any errors preventing this from happening so that the booking system works as intended. The user will also need to

		be able to view the bookings that they have made
The user can get help and information about the attractions and facilities	HIGH	The user will need to be able to understand what attractions and facilities there are at the zoo and get any assistance if they aren't sure of something. This will be useful to them if they want to visit the zoo
The user can access the materials provided to support educational visits	LOW	The user will need to be able to access the materials if they want to visit the zoo for their education so that they either know if it is good for them or if it will help them with their education
The user can access the accessibility features to support them if they are impaired	MEDIUM	The user will need to be able to access the accessibility features and use them if they are impaired so that the website can adjust its look accordingly to assist them. This will enable impaired users to use the website based on their needs

Non-functional requirements

Non-functional requirements refer to the requirements for the system. Below is the table containing each of the non-functional requirements, their priority and justification:

Description	Priority	Justification
The system displays all of the pages in the correct place	HIGH	The system should display all of the pages in the correct place without any issues so that the user can navigate the pages and read the information on each of them
The system allows the user to log in to the website if they already have an account	MEDIUM	The system should allow the user to log in so that they can reserve and book tickets for the zoo or check availability and book a stay at the

		hotel as these will only be restricted to only registered users. They will also need to be registered to manage their bookings
The system allows the user to register if they don't have an account	MEDIUM	The system should allow the user to register as they will need to have an account to log in, so they will need to be able to register first before doing this. They will also need to have account registration to manage their bookings and to also reserve and book tickets or check availability and book a stay at the hotel
The system allows the user to access all of the pages without any bugs or other issues	HIGH	The system should allow the user to access all of the pages without any errors preventing this happening and the website will need to work as intended for this so that the system enables the user to access these pages
The system allows the user to reserve and book tickets for the zoo without any issues	MEDIUM	The system should allow the user to reserve and book tickets to the zoo without any errors preventing this from happening so that the booking system works as intended. The system should also allow the user to view the bookings that they have made
The system allows the user to check availability and book a stay at the hotel	MEDIUM	The system should allow the user to check availability and book a stay at the hotel without any errors preventing this from happening so that the booking system works as intended. The system should also allow the user to view the bookings that they have made
The system allows the user to get help and information about the attractions and facilities	MEDIUM	The system should allow the user to understand what attractions and facilities there are at the zoo and get any assistance if they aren't sure of something and allow them to view the page. This will be useful to them if they want to visit the zoo
The system allows the user to access the materials provided to support educational visits	LOW	The system should allow the user to access the materials if they want to visit the zoo for their education so that they either know if it is good for

		them or if it will help them with their education. The system should allow the user to access the page for this
The system allows the user to access the accessibility features to support them if they are impaired	MEDIUM	The system should allow the user to access the accessibility features and use them if they are impaired so that the website can adjust its look accordingly to assist them. This will enable impaired users to use the website based on their needs. The system should allow the user to access the page for this
The system should hash the password entered by the user when they register and pass it to the database	HIGH	The system should hash the password entered by the user when they register and pass it to the database so that the user's password is protected from any hackers or other malicious users. Passwords are sensitive and can be susceptible to being hacked
The system should recognise an incorrect password entered by the user	HIGH	The system should recognise an incorrect password entered by the user so that only the password set by the user is accepted. This will ensure that the user enters their password correctly and that no-one else except the user can enter an incorrect password and hack into the user's account

Key performance indicators (KPIs)

This refers to the indicators that show how the website is performing. Below are the KPIs for this website:

- The number of users to see how many users are logged in to the website at the same time. This can help in understanding how the website is progressing in terms of the data on the days, weeks and months to see if the number of users is increasing, decreasing or staying the same

- The number of tickets reserved and booked to see how many users are reserving and booking tickets at the same time. This can help in understanding how the reservation

and ticket bookings are progressing in terms of the data on the days, weeks and months to see if the number of reservation and ticket bookings made by the users is increasing, decreasing or staying the same

- The number of users who book a stay at the hotel. This can help in understanding how the hotel stay bookings are progressing in terms of increasing, decreasing or staying the same

- The response time of the website. This can help in understand if the website loads at a suitable rate in terms of the pages and content

User acceptance criteria

This refers to what the user should be able to do and what would be acceptable to them when they access the website. Below is the user acceptance criteria for this website:

- The users can access the website

- The users can log in or register before they reserve and book tickets for the zoo, check availability and book a stay at the hotel or manage their bookings

- The users can reserve and book tickets for the zoo

- The users can check availability and book a stay at the hotel

- The users can get help and information about the attractions and facilities

- The users can access the materials provided to support educational visits

- The users are able to use accessibility features to adjust the website to their needs if they are impaired

How the solution meets the needs of the client and users

I believe that the solution I have proposed meets the needs of the client and users as it includes everything that they have asked for in terms of their requirements and it will also

implement the appropriate functionality into the digital solution which they expect. The proposed solution outlines how I will implement the required functionality in order to meet what the client and users wanted in detail along with other features that I could add to make the digital solution better for them. The solution mentions that it will be a website which can be accessed on tablets, mobile phones and other devices which I believe will enable the users to access the website regardless of the device that they are using and the website will consist of pages which contain all of the content that the client and users have asked for, including the potential features suggested by the client. Along with this, the proposed solution also meets their needs as it describes what the client and users need to do to access what they want and any adjustments that they would need to make to be able to find the content that they want to view.

How potential risks will be mitigated

The potential risks associated with the digital solution could be risks such as security and data in terms of the user, especially when it comes to their details such as their password. This could be a potential risk as the user's identity may be compromised if their account is hacked and their password is figured out by a malicious user. I believe that to mitigate this potential risk, the user's password would need to be hashed each time they log in or register as hashing a password can help in keeping it secure since the password would be encrypted in another form, making it hard for any hacker or other malicious user to compromise the user's account and therefore increasing the overall security of the website and database which will store the user's name and password. Another potential risk could be the protocol which is used for the website as this can determine how secure the website will be in terms of encryption when the data is passed and there are certain protocols which are not considered to be secure, such as HTTP as a website that uses this protocol is subject to being monitored by a malicious user who can read any data that is sent to the website which can make it susceptible to being intercepted. To avoid any issues regarding security, my website will be using HTTPS as it generally considered to be very secure due to the fact that it uses the SSL/TLS protocol to encrypt any communications that take place on the website so that attackers can't steal data. This will protect the identity of the tutors and the users who are using the website, especially after they have registered with their name, email and password and logged in as they will be sending this data to the database, so using HTTPS in this case would be important.

Project risks

I believe that there could be risks to this project. Illness could be a risk as it can result in the project being delayed or even abandoned depending on how long the illness lasts. Another risk to this project could be the time that it takes to complete the project as it has a time

limit which will need to be followed and not working according to the limit could result in an incomplete project with important features missing or it could result in a project that is complete but has some errors causing it not to function as intended. Because of this, it would be important to ensure that there are measures in place to mitigate any potential impacts that these issues could have directly on the project and also minimise any chance that the project may not meet the requirements of the client and the users.

Project methodology

For this project, I will be using the agile methodology. This is because in agile, you can work in parallel and do different phases simultaneously without having to do each phase step-by-step and because the phases are not rigid in terms of their order. Also, agile allows for the iterations to be released in phases with feedback given for each release which can help in understanding how the project is meeting the requirements of the client and the users along with what is going well and what needs to be improved for each phase. By doing this, it will allow for each of the phases to be adapted accordingly based on the feedback given to ensure that the phases are in line with the requirements of the client and the users, resulting in a project that is complete with all of the client's and users' needs incorporated from the continuous feedback given in the iterations. Along with this, agile will also help in getting the project completed on time as a result of working on phases at the same time and the possibility that the project may also be completed before the deadline.

Hardware and software requirements

Since the website for the digital solution will be available on all devices including tablets, mobile phones and laptops, it would be important to ensure that all of the hardware requirements and software requirements are followed. For tablets, mobile phones and laptops, this would include a processor, RAM and storage, display, operating system, cameras, connectivity options and battery life. In terms of the software requirements for tablets, mobile phones and laptops, this would include an operating system which the software can function on along with the appropriate version of these devices for the website to work as intended for the users and the website would also need to meet the requirements of the software so that it functions correctly in accordance with the needs of the client and the users. It would be important to ensure that the hardware and software requirements are in place for the digital solution to prevent anything going wrong during the development of the digital solution and after the digital solution is complete and released for the client and the users to use.

Language chosen

For this digital solution, I will be using Flask which is a framework written in Python to implement the functionality for the website. This is because it will be the best option for me to include everything that the client and the users have asked for as I believe that I have good knowledge of this language to be able to incorporate these requirements compared to using other languages as I believe that my knowledge of these languages isn't at the level needed to be able to implement the functionality for the digital solution. Taking all of this into consideration, I believe that Flask will be the best choice of language for me to use in developing the website for the digital solution.

How relevant regulatory guidelines and legal requirements will be addressed

I believe that the relevant regulatory guidelines and legal requirements that will need to be addressed in relation to tourism and the leisure sector would be the Data Protection Act 2018 as it gives individuals the right to store their own personal data and ensures that their data is protected. This is because the users will be signing up to the website and they would have to enter their personal details such as their username and password to log in and due to this, I believe that it would be important to follow the rules around this piece of legislation as it ensures that the website is operating legally when storing the users' personal data. Additionally, there will also be a database which will store the users' personal data when they log in to the website and this database would need to comply with the Data Protection Act 2018 to ensure that the data doesn't end up falling in the hands of a hacker or other malicious user.

The other relevant regulatory guidelines and legal requirements that will need to be addressed are the legislation around health and safety for the staff who would be working at the zoo to ensure that they are safe at work which are the Health and Safety at Work Act 1974, The Management of Health and Safety at Work Regulations 1999, The Control of Asbestos at Work Regulations 2012 and Health and Safety (First Aid) Regulations 1981. These are the pieces of legislation that I believe will need to be addressed for the zoo staff and also the users as they would be visiting the zoo. These pieces of legislation link to tourism and the leisure sector as in software development, it would be important to ensure that if the software consists of people's personal data, there is a database which can store this data safely from any potential harm that may arise such as hacking, hence any regulations and legislation must be followed when it comes to storing data. In the tourism and leisure sector, it would be important to ensure that the regulations and legislation around health and safety are followed, particularly if there will be visitors at the zoo. Because of this, it would be important that any rules around health and safety such as the pieces of legislation mentioned in this justification are followed and that anyone who will be at the zoo is complying with the legislation to ensure everyone's safety and health

when they are exploring. In addition to this, the zoo should also comply with the legislation in terms of the way that it is structured and the layout arrangements that it has to further ensure that it is a safe and healthy environment to visit and work.

Additionally, any regulations or legislation around tourism and leisure will need to be followed to ensure that the zoo is operating legally. This will further enable the zoo to be considered a much safer place for visitors and staff and make sure that it is for tourism and leisure purposes.