

CRAZY BALD HEAD AUTO-DETAILING MANAGEMENT SYSTEM

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**Group No: 22**

**Group Name: The Optimizers**

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## **Objectives of the system:**

### **Front end:**

The Front-end system was aimed to replace the use of a paper driven system by creating an electronic system which will enhance business performance by helping the business make better business decisions.

This was met by enabling different users to perform different tasks on the system. The system allowed the manager to input and update customer details which in turn were used to create a booking for a customer. Customers can view details of the variety of packages and services offered by the business as well as dates that are available to make a booking. A booking table was used which stored the date and times of each appointment to avoid a customer from double booking, this was a major business issue that was required to be resolved. After a booking is made, the customer is presented with a receipt generated by the system which summarized the information pertaining to their appointment. The manager was also able to store and update employee details and schedule employees to jobs via the system. This was necessary as it helped to keep track of the different employees working on a job.

The system allowed to owner to add and update information on the packages/ services he kept on hand as well as the stock he used for these packages/ services. The system stores quantities of products needed for each of the packages/ service, this enables the system to calculate the amount of stock being depleted. When stock quantities are too low, the owner is notified by the system to update his stock. This helps the business perform better and maximises efficiency as no time and customers are lost due to the lack of stock.

The system generates a stock report and an employee schedule with the help of Crystal Reports. These reports help the business identify trends and patterns in the data as well as make efficient business decisions.

### **Website:**

The objective of the website was to allow the public to be able to access and view the variety of packages and services offered by the business. This was enabled by creating a website with public pages to allow potential customers as well as existing customers to access that information. Potential customers who are interested in booking an appointment can add their details onto the system to proceed to create booking. Existing customers are required to log into the system. The site allows customers to update their details, choose the package/ service they'd like, view available dates for booking and select the date they would prefer. The customer is issued with a receipt confirming their booking.

The site also enables admin (owner and manager) to perform most of the tasks they were able to perform on the FES. However, the managers will no longer have a responsibility to manage customers and their bookings as this can now be done by the customer themselves on the site. This allows for the extra time to be used on other constructive tasks.

Reports that were shown on the FES are also present on the site to be viewed by admin.

## **Critical success factors relating to the front-end processing:**

- **Transaction processing requirements:**

For all users, CRUD was enabled for all the data they interacted with. Other core transaction processes that are enabled includes: viewing packages/services, booking an appointment, processing stock depletion and the assignment of employees to jobs.

- **Usability of the system:**

In terms of usability, the system uniform, vibrant and easy to interact with. All screens are designed to hide unnecessary components until the user is ready to interact with it. This combats a cluttered screen which can cause confusion and overwhelm the user. All components are bright and carefully named to help the user understand what processing they're trying to do.

- **Error handling:**

To reduce errors, validation has been used on all forms. The system was tested extensively to ensure that no fatal errors occur that will cause it to crash. Numerous try/catch statements were used to compensate for any errors that occurred.

- **User friendly:**

To ensure that users were able to understand and use the system quite easily, tooltips were added across all pages of the system as a form of help for the user.

- **Business Intelligence:**

Crystal Reports was used to incorporate Business Intelligence reports into the system. Stock depletion reports as well as employee schedules were generated. These reports aids management to make more efficient business decisions.

## **Front-end Errors Classification:**

Error Type	Description	Follow-up Action
Level 2	Error with customer double booking. System was allowing for the same time slot to be booked twice.	System now makes use of a calendar and a time data table to store available dates and times, as well as an appointment table to store already booked appointments. Before a booking is made, the system does a search to validate that the specific date and time slot has not already been booked. If it has, a notification is sent out to the customer to choose another date.

## **Critical Success Factors (Website Processing):**

Ensuring that the website has business processing capacity and is fully integrated with the FES:

- o Once a customer registers on the website, they are automatically saved on a database that is used by the front-end system. The website will allow users to and access the packages and services offered by the business and allow them to make a booking based on available dates generated by the website. For all users, CRUD was enabled for all the data they interacted with. If they make a booking and a staff member check for their details on the front-end system, it is already saved because they registered on the website.

Website Usability:

- o The website interface is user-friendly and easy to interact with.
- o The screen contents scale as best as possible regardless of the screen resolution.
- o The vibrant colour scheme incorporates the colours of the business's logo, which makes it more enticing to interact with.
- o Navigation is familiar and easy to use.
- o The website is consistent and doesn't not have any redundant information added.
- o The tool tip feature helps guide the user through the website.

Website Security:

- o To ensure website security we have included a login for users to make use of. You make a booking without registering. Once you register all your details are captured into our system and we can track all your information.
- o Tabs in the navigation are visible based on access privileges.

Business Intelligence reports:

- o Stock depletion reports as well as employee schedules are generated by the website.
- o Customers are also able to view their past bookings.

## **Website Errors Classification:**

Error Type	Description	Follow-up Action
Level 3	Pages were open to the public, no restrictions on pages.	The website now allows a user to login/register which controls the user's access on the website. The manager and owner can view admin details.

## **Response from Client:**

Greetings Optimizers

Firstly, I would like to thank you guys for creating such a detailed and sophisticated website for our business. The thought and effort put into it is highly commendable.

After being guided through the system I have to say I am quite impressed.

The website fulfils the primary objectives of the business and solves all the problems I had mentioned during our first meeting. It is user-friendly and easy to navigate through which is great because we all aren't very up to date with the technological advancements.

With the business growing at a rapid pace, this system is a real big asset to our company. It prevents human error and provides a safe storage space (which is easily accessible) which allows the business to run seamlessly.

This system has exceeded my expectations, from the prevention of double bookings to the generation of reports, I am highly impressed.

Regards

Mr Moodley (062 535 8508)

## **Reflections and Lessons learnt:**

**Katelyn:** Teamwork was key to our major project. We pushed hard to get everything done in the little time that we had, I'm proud of how well we worked under pressure. I learnt that a team is made of individuals with their own respective strengths and weaknesses, and it is important for each member to use their strengths and work on their weaknesses in order achieve the best results.

**Priyanka:** Our team has worked exceptionally well considering the circumstances that we were in. I've learnt that time management and communication are key. Together, we worked well and the time and effort we put into the project really reflects on the final product. I am proud of our team and the system we created.

**Tashin:** In the entirety of the project, I've learnt that teamwork and communication is key. From the experience of this project, together with the team, it has been a great learning experience on how to develop and share ideas as well as implement these ideas.

**Tyrone:** Time management and communication have been key - trying to make time in between other modules and assignments due has been the greatest difficulty, but communication in the

design process has been the biggest factor in bringing our project to completion under these constraints.

**Liam:** As a team I believe we worked well together considering the problems we faced when it came to communication. From this project I understand how important it is to do your own research and extra work to understand concepts better and understand how to apply them