Investigation

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# Introduction

The Raptor's Hotel, located in Manchester, was founded by 2 brothers, John, and Eric, also known as the " Raptor Brothers".​It was established back in 2020. Their parents both worked at a Jewelry shop, selling all kinds of jewelry across Manchester. This is also hinted as both brothers decided to in cooperate it inside the logo as a subtle way to reference/ hint to their parents' nature of being calm but precise like a raptor, ​the raptor in the logo also intensifies the strong nature of the hotel. This is reinforced with the slogan "Stay in the heart of Manchester" as it further emphasizes the luxury to live in the heart of the city (Manchester).​I will be working with the “Raptor Hotel” to create a booking system to enable the business to grow and expand.

# Investigation plan

Here I will be documenting and gathering all the information and data necessary for the system I am creating for the best and most suitable outcome.

One way I could gather information is to physically contact them, meaning carrying out surveys/questioners, this is because it will give me insight into how the business is performing or ways I could solve and improve their current system.

Another way that I could gather information is by conducting interviews with current employees. Initially I will be interviewing a few members and it will also give me a good chance of asking them a few questions. This will give me a deeper understanding of how the hotel works and functions so I can improve their system as much as possible.

Lastly, another way I could gather information is by executing observations. This will give me a deeper comprehension of the business itself, As I will see with my own eyes how the business thinks and executes its orders. This will make me think critically and analytically about the system and ways I can improve it.

In addition, I will research other current Hotel/Booking systems to see how they work and function and what the results of carrying out these specific functions are. Afterwards I will select a few features that I would like to add to the system and explain why I chose those features and why they are useful.

# Investigating the business

For the beginning of my investigation, I wanted to observe how a client/customer would make a booking. To carry this out I looked online and made a booking myself. The hotel does not have an online form system, meaning you must either check in at the desk or call them to make a reservation and write them down in a piece of paper. They will ask you to for your personal details e.g., full name, address, post code, phone number, emergency contact information etc... Next, they ask you which room you would like. Afterwards they will ask you how many beds you need and which size you would like. If you would like to have a balcony etc. All this information is written in a piece of paper and stored in a massive folder. I then tested to see the results if a normal customer would take registering/Booking a room. Surprisingly, on average it took 10 minutes for the whole process.

Later I interviewed a few employees and carried out a short questionnaire with the staff. Here are a few questions I have asked during the interview:

“What do you like about your current system?”

She responded with “it’s an easy system to use “which I completely agree with, however it has its flaws as some handwritings are almost ineligible which could lead to errors/mistakes happening. Therefore, I will make my system be typed based/ use visual basic as it is more legible and quite easy to use.

“What do you dislike about your current system?

She responded with “Sometimes some papers/files get lost or damaged “Which is a valid point to jot down as most paper-based systems are hard to maintain. Therefore, I propose my system to have a database built in so nothing gets lost/damaged which will enhance the customer experience.

“What would you like to implement into the new system?”

She responded with “Checking availability meaning if 1 room is booked the customer can’t book that same room”. This is a crucial feature to add as a hotel wants to maximize the customer experience and eventually build customer loyalty, if the customer results in having issues he wont likely to come here again, on top of that it’s a paper-based system now so it’s hard to track is the room is busy or not. Therefore, I will implement this feature in the final product.

I then carried out a short survey asking current customer and staff about their current experience with this hotel and rate it out of 10. in the survey I asked the following questions.

Are you currently satisfied with the current system?

Do you find it easy to book room/service?

Would you make any changes to the current system?

Would you come back again?

Would you come back again if the current system is improved?

Here I have created a bar chart comparing staff’s response and customer response on average.

A picture containing text, screenshot, plot, diagram

Description automatically generated

As we can see there is a lot of room for improvement, both customer and staff would like to make changes in their current system to enhance both the working and customer experience. I will also carry out another survey after my system is finished to see if there is any change.

In addition, I asked a worded question in the survey which is the following. What would you implement in the system to improve your experience?

Which most customers replied with.

* Add another booking system as an additional way to book a room. Where we can see which rooms are available etc.…(a computerized system)

What I learned from gathering all the information/summary.

# Desked Based Research

For my desked based research, I wanted to research hotels within Manchester as this is where The Raptor Hotel is located. This is because I wanted to look at competitors nearby and adapt and turn the system more compatible.

A typical staying in a hotel last for 21 to 22 hours. The most common time for a stay in is afternoon to morning meaning customers stay there overnight.

A screenshot of a map

Description automatically generated with medium confidenceI went online and found a company called “Hotel.com.” It’s a website where you can book hotels. You simply select the location, date of check in and check out and search. It gives a variety of options with each having their own rating out of 10. I really like their layout with lots of useful information about the hotel and nearby landmarks/ places to visit. I would really love to add the “What’s around “section/ portion of the website. I believe this may be useful for not only customers but staff as well. It will enhance their stay in and enjoy their holiday as munch as possible. Here is a picture to help you see what I’m looking at as an inspiration.

Some of the stuff may be too difficult to implement in visual basic like the task bar on top where you can switch from rooms to location etc.

A screenshot of a computer

Description automatically generated with medium confidenceNext, I looked at the most popular travel/ hotel booking website called “Booking.com”. There are many features that I liked like the comment section on reviews to find what people liked and disliked and the features tick box on the side where you can narrow down your options where you would like to stay. But the feature that stood out to me the most was the room type section of the website. What I like about this feature is that it gives every single detail of the room so the customer won’t be disappointed on the day and will definitely give a great first impression. Here is the reference I will be looking at.

Lastly, I looked at my final website called “Lastminute.Com”. This is another Hotel booking system. Again, I really like a lot of the features on the website but the one that sticked out to me was the pictures of the room they are staying in. It gives an honest impression and image of the hotel. It also sets expectations for customers which will improve their stay in in the hotel and will not disappoint customers. Here are some of the pictures I gathered of the same room (there is more than these 2).

A picture containing wall, interior design, indoor, furniture

Description automatically generatedA picture containing ceiling, indoor, interior design, floor

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence

WHAT I LEARNED FROM GATHERING THIS INFORMATION/SUMMARY

# Data flow diagram(s)

## Customer Diagram

A picture containing text, diagram, screenshot, line

Description automatically generated

## Staff Diagram

A diagram of a hotel

Description automatically generated with low confidence

# Overview of the existing system

## Inputs into the existing system

When considering the inputs going into the existing system, the most noticeable input comes from the customer as he inputs all his details into the current system. This includes the customers room preference, how many beds, if they would like to have a balcony or not, phone number, etc.…

The current system consists of a customer talking to a member of staff. It’s written in plain white paper, and then stored in a file which is then put on a shelve near the desk.

However how they manage and maintain the input is very ineffective as they constantly loose documents of customers.

## Outputs into the existing system

When considering the main output of the existing system is again the customer and their personal details, which once made a booking either by call or desk they will still need to check in again at desk to get which room/ door number they have and their extensions (such as balcony or pool) and will be given in a form of a recipe.

However there way of checking in and paying takes quite long as they have to check most of the customers details and their might be a long queue.

## Processing into the existing system

At the minute, there are 2 different ways for processing into the existing system you can, book a room by either calling the hotel or check in at desk.

If the customer decides to book a room at the desk, the member of staff allocated in the reception(the receptionist) will ask for personal details such as phone number, Date of Birth, and other contact details. Then the receptionist will ask you for how many nights are you staying in. Afterwards the receptionist will ask you which of the type of room you would like with extensions (such as balcony or pool). Next, she will ask if you would like breakfast provided in the morning or not. Lastly, the receptionist will give you the recipe with the price and extension pass and if breakfast is provided or not.

If the customer decides to book on call, the member of staff working with the receptionist will answer the calls (customer assistant) will ask you for your full name and write it down in a piece of paper whilst asking you for personal details such as phone number, Date of Birth and other contact details. Then the receptionist will ask you for how many nights are you staying in. Afterwards the receptionist will ask you which of the type of room you would like with extensions (such as balcony or pool). Next, she will ask if you would like breakfast provided in the morning or not. Lastly, the customer assistant will send you the unique code sent through text with the price and extension pass and if breakfast is provided or not. When checking in at the desk, the receptionist will ask for your unique code that was sent through text and give you the recipe with the details I mentioned earlier.

If a customer is coming again, then they will search for all there details in the big file I mention earlier, until they find his details and as the same question except details. At the end he will end up with a recipe.

When checking out of the hotel, whether you checked in on call or in desk, the receptionist will ask for you to give her your personal details just for safety purposes.

## Limitations with the existing system

The biggest limitation with the existing system is that it is a paper-based system. This means that it’s a very slow and ineffective way to manage and maintain documents. This is because the receptionist must write the personal details down, as well as how many nights, which room, any extensions (such as balcony or pool), breakfast provided etc. Another disadvantage of a paper-based system is that some staff members writing may be ineligible. Furthermore, you have to store the documents inside a file, which may take a lot of time and space. In addition, files may be lost or damaged. Therefore, leaving customers with a bad first/ last impression. Therefore, being a limitation with the existing system.

Another limitation with the existing system is that there are no image and full description of the room. So, customers must go with their gut feeling and decide the room they want to stay, which can be a horrible experience. Furthermore, this can lead to customers not being satisfied, as they may not meet their expectations. Overall, leading to poor impressions not just for staff but for the whole hotel. Therefore, being a limitation with the existing system.

Since it is a paper-based system a further limitation with the existing system is that collisions can occur. This is because the staff has to check trough the whole file/folder. This can lead to mistakes happening has not everything is listed, and there is not indexed to check room availability. So, they must go through every single document. Therefore, slowing down the process. Thereby, being a limitation with the existing system.

# Problem definition and specification

The main aim of this project is to create the best possible outcome for the company I have chosen, to accomplish this I must look back at the current system and see what I can probably use from the it for the new system but also to see what I can improve upon and see what to avoid in the current system. To create the new system, I will be using Visual basic as it is what I’m most familiar with therefore I will be most effective utilizing it.

First, I would like the new system to look presentable and attractive to the people using it. To do this I will try and use a range of different colors that visual basic offers, and I will also make sure the colors complement each other to create the best-looking result. This also means that I will have to arrange everything in a neat fashion/order. So that the system doesn’t look messy or rushed.

Not only the system should look appealing, but the system should also be easy to navigate/user friendly. To build upon this I will need to build upon the current existing system, meaning that I will have to turn all the paper-based system into a suitable form. To do this, first I will make sure that the system is simple and clear for customers to understand/making it user friendly. There will be various forms that I will need to create in visual basic such as login page, booking page etc. There should also be buttons allowing users to go from one to another where required.

In the new system I will be addressing the current system biggest flaws, which was the paper-based system. To solve this, I will turn all the questions when the receptionist asks to the customer into a form. I will also make sure that the form is suitable for the customer. Afterwards I will give/ create staff log in to all members of staff or they can create them by themselves. I will make sure that staff members will be able to store all documents separately. One with current booked rooms and one with other documents for existing users. This is because this will minimize if not eliminate any collisions. Therefore, no customer will be unsatisfied or left disappointed.

Another big flaw of the current system is that there is very little to no information about the room, so customers must decide with their gut feeling. To work on this, I will visit every room and take multiple pictures of each room and put them on my system to get a general idea of how the room is like. Each room with its own pictures to get a variety. I will also ask the member of staff what is provided in each room and jot it down. Afterwards I will put it on the “Room Description” area, so that customers know what comes with the room and wont leave unsatisfied and disappointed.

A further aspect of the system that I will implement is the “what’s around” feature. This is a feature that will allow both customers and staff members to be able to see which landmarks are nearby the hotel. Since, the Raptor Hotel is in the heart of Manchester I will look and visit nearby landmarks, such as the Manchester Art Gallery or John Rylands library etc. This will definitely enhance and improve the customer experience and stay in as it will give more reasons to stay in the hotel overnight and to go out and explore, leaving customers with always something to do.

Another aspect of the system will be that I will need a login page for staff. To do this in visual basic it will be its own form with its own necessary programing, and I will need to use a variety of tools such as button, textboxes, and labels etc. Once the member of staff has logged in it should display their name on the top, so you are now it has worked and feel welcomed. Staff can also check and change room availability and more. I will also create a similar login page for customers, if possible, I would like to save their details which they signed in with, so they won’t have to re-enter same detail every time they want to log in. This means that I wont have to just create systems for a staff members and customers but also, when starting to fill in the form, if you are a customer, a button should appear saying if you would like to log in or continue as guest, then give details at the desk, and of course ,for customer and staff, a button that allows you to log out or exit once finished.

To add to that point, customer should, if logged in, be able to edit their saved information, in case anything needs to be corrected or changed. The members of staff should have a similar feature to allow changing their saved details, for example, they should be able to change their staff name or staff address/location etc. Staff may be able to change customer information as well just incase someone if someone doesn’t know how to change the information. On top of that staff should be able to find customers. For staff to be able to find customers I will need to implement a search function/ feature, this will enhance the staff and customer experience and make it user friendly as it makes so munch easier to find a customer. To do this in visual basic I will need to use SQL commands and database that I will have to create. The database should be able to contain save information of both staff and customers and should be in 3rd normalized form so that so that it is easy to read and gather data from, as well as save data as well.

# Limitations on proposed system

# Why is visual basic used?

# Objectives

1. The system should be able to work and fully function.

**Success criteria:** The system should be able to make a booking and should be displayed in the database.

1. Customer should be able to log in.

**Success criteria:** There should be a form, asking customers to input their user name and password. If inputted correctly it should be able to let them log in, otherwise it will display an error message.

1. Staff members should be able to log in.

**Success criteria:** Like the customer, staff members should receive a form, asking them to input their name and password. If inputted correctly it should be able to let them log in, otherwise it will display an error message.

1. Customer should be able to sign up.

**Success criteria:** There should be a form, asking customers to enter their personal details. Then asking them to create a username and password which, should be saved on the database. Then redirecting them to the log in page.

1. Staff members should be able to sign up.

**Success criteria:** Like customers, staff members will receive a form asking for their personal details. Then ask them to create a username and password and a staff member only unique code, which should be saved on the database. Then redirecting them to the log in page.

1. The system should look neat and presentable.

**Success criteria:** Everything on the system should look pleasing to the eyes, to achieve this will use a range of colors that complement each other, and nothing should be messy/ unclear. I will ask people if my form looks appealing and tally up and ask for feedback.

1. The system should be user friendly.

**Success criteria:** The system should be clear and easy to understand and use. The users should understand if they press a button, it’s a button not a label or text box. I will also ask people to look at my form and ask them if its clear or not and tally up the result and gather feedback.

1. Should authorize staff to add, edit, delete, and find customers.

**Success criteria:** There should a search function where you can search for customers with either customer name or customer ID, once found the customer they should be able to edit, add and delete that customers information.

1. The system should have the “what’s around” feature where it displays nearby landmarks.

**Success criteria:** Customer and staff members should be able to see nearby landmarks, it should also display how far from the hotel it is, and maybe if there is space I might add a picture of the landmark.

1. There should be pictures of the room in the system.

**Success criteria:** Staff members and customers should be able to see a picture of the room, with accessories, and decoration. This is to get a brief idea of what you are paying for. Staff members should be able to add and edit the picture/s.

1. The system should display a brief description of the room with what the room comes with, for example, coffee machine.

**Success criteria:** Staff members and customers should be able to see a brief description of the room and what it comes with. This also gives brief idea of what you are paying for. Staff members should be able to add and edit the description.

1. Customers should be able to edit saved information.

**Success criteria:** Customers should be able to edit saved information, for example, if a customer wants to change their name, they could do so in the form.

1. Staff and Customers should be able to select rooms.

**Success criteria:** Staff and Customers should be able to select the room they want to stay in and put it on the database. (Room no)

1. There should be no collision.

**Success criteria:** Should display the availability of the room, for example, if the room is in use, state that the room is “occupied”.

1. Should be able to authorize staff to change availability.

**Success criteria:** Staff members should be able to change the availability of the room, for example, if the room is “occupied” and that person is no longer staying in staff members can change the “occupied” into “available”.

1. The system should be able to allow customers to continue as guest/ no login required.

**Success criteria:** The system should allow customers to continue as guest / no login required. Meaning customers don’t need to log in or sign in to make the order.

1. Customers should be able to log out.

**Success criteria:** Once the customer has finished what they wanted to do, the customers should be able to log out or exit out of the system.

1. Staff members should be able to log out.

**Success criteria:** Like the customer, once the staff member has finished what they wanted to do, the staff members should be able to log out or exit out of the system.