Samuel Bailey | October fourth twenty twenty

Computer Science 302: Systems Analysis & Design on Study.com

Systems Analysis & Design – Assignment: System Design Report

Here listed below we have the scenario of the project that will help us understand what it is exactly that we are creating this project for.

Backyard Adventures (BA) is a guided tour and water sports rental company in Jacksonville, Florida run by two brothers, Shawn and Harry Weaver. They advertise Backyard Adventures in several local and regional magazines and web sites, but the Weavers don't feel that it is attracting new business.

BA rents space at a nearby marina, where Shawn runs the office, and handles rentals on the days Harry's busy with the tour groups. BA has two main business segments: rentals and guided tours but also does some instruction on the side if needed. Customers are required to make reservations in advance for scheduled tours but sometimes space is available for extra customers. Rentals are booked by reservations and walk-in customers.

Melissa Smith, a local college student, handles the telephone inquires and reservations. Daily she enters the reservations in a binder, with tabs for each business activity. This list is used to back-up the Microsoft Access database that she uses to record reservations. Each morning, she runs a report that will print out the reservation list for the day. Not only does she maintain the reservation database, but she also uses an accounting software to keep BA's books.

Although the BA database handles the basic information, Harry has noticed some drawbacks. On several occasions the reservations for the tours have conflicted with his availability. Shawn and Harry would like to get information about rental patterns, customer profiles, advertising effectiveness and future business opportunities. They have been talking about either updating their system or replacing it with a new information system that would meet their current and future needs but needs more details on which option is feasible for the company. Your job is to help come up with a plan to address these issues.

In this report we will be answering the following questions for BA or Backyard Adventures.

1. Planning: Define the scope of the problem. You know that BA has a mix of manual and computer-based techniques and they want to update their system or buy a new system. Explain the steps in a feasibility study to determine the anticipated cost and benefits for the best option for BA.
2. Requirements: Justify the functional requirements. Explain what documentation will be used to analyze the needs of the end users to ensure the new system can meet their expectations?
3. Design: Use the information that you received from the system requirement documentation to explain how you will design the new or updated system. What are the necessary specifications and operations of the user interface that will meet the functional requirements? Will you use a logical design or a physical design and why?
4. Development: Explain the development paths that will help start production using these three key topics: the impact of the Internet, software outsourcing, and in-house software development.
5. Testing: Discuss how the system will be tested to determine if the proposed design meets the business goals.
6. Implementation: How will the system be implemented? Who will use it and what is the training plan? What would be the cost of implementing the system? Discuss the post-implementation evaluation plan, does the system meet specified requirements.
7. Maintenance: Does the system need any updates to improve performance? Identity all maintenance activities that will help with making the system operate more efficiently.

Starting from the beginning of the assignment we need to have a clear definition of what it is exactly that we are doing. The company (BA) takes reservations via a binder and using Microsoft Access. The owner is having problems with the reservations conflicting with his schedule. Our goal in this report is to define a clear path on how to fix this issue taking whatever steps necessary to fix this problem.

There is a couple of different solutions as to figuring out what this problem, the first solution is to start from scratch and wipe all of their systems and start on a new platform. Something like Vagaro, FlexBooker, or TimeTrade there is literally hundreds of applications that can handle the requirements of what is needed here. Cost for all of these programs vary but if we take an average it would be somewhere between 400-1000 dollars. Next we can move to updating the currently being used. Microsoft Access is the current system that is being used by the company and it is possible to just update the system and use the newest features of the program. However, this application seems a little complex for what BA is needing. BA only needs a platform to manage scheduling appointments and reservations. Microsoft Access is an entire database that just seems to be a bit of overkill for the job, not to mention the price of having to pay for Microsoft Access. Having a database has some benefits in the job world but none that really fit the benefit of the company at this time in its career.

As for the functionality the system is mainly managed by a college student, so it needs to be something simple and easy to use. The end user really only needs something that is efficient and working there is no specific details about what is needed. Something that I believe could come in handy for the company is having a system where the consumer/customer can view and manage their appointment I believe this would work wonders and save time instead of having to call the office. For even more money to be saved this system could be changing into a different layout all together to help change the effectiveness of the company.

As far as design goes this is where I believe we can approach with a different angle to save not only time on our end but also for the customer. The specification again doesn’t have anything to specific except for having a system to input reservations. With this being said I think our new idea should be completely digital moving from the ground up. Starting with the way we can take input. In design we will be building a website that takes in reservations on a google calendar. This calendar can be seen by all the admins, for example the owners and the receptionist. Now to force google calendar to set certain times only we allow we will be using a third-party app called Jobber. Jobber is a simple scheduling service for businesses. This will meet the requirements of not conflicting a schedule with the bosses which was a previous problem. If there is a day that the boss can’t work, you simply set that day as taken in jobber. More or less the boss could have also communicated with the receptionist and told her to reschedule that reservation or cancel it all together. Jobber also supports accounts to where the user or renter/user making the reservation must make a profile before doing anything. This makes it very easy to pull a report for how many times that person has made contact with the company. As well, this is the exact job for the receptionist so again the boss could just communicate with the receptionist instead. However, we press on. So far the design is all logical and nothing has yet been put in place. For walk in customers the receptionist can simply check the google calendar to see if there is an availability. So, nothing changes with that concept.

In Development, we look at the impact of the internet that we have. Since we will be building a website implementing these calendars and application program interfaces, we will have an effect on the internet taking up space. For software outsourcing we are obviously using google and jobber, google calendar is free and jobber is also free just for scheduling. The program jobber can do more than needed but we won’t be using it to its full potential. As far as in-house development, there will be a website that needs to be built. Although you could make something complex with a dev, that isn’t exactly necessary. The owner could just make a default website on wix or some other website builder like that one and do all of the work by him/herself.

Next we look into the world of testing. Testing will be generally simple for this project; we will be checking the security and usability of the website and it is integration. We will be double checking to make sure this is exactly how we need to set up to line up with the business goals of the company.

Implementation of the system will be fast and painless, while still being reasonably cheap. Again, the project didn’t give a budget so we could have done everything at the highest level but that just isn’t needed for the size and type of this company. The company is relatively small and only has three employees from what the statement says. First off, we will need to purchase a domain which cost around sixty dollars for two years. Next we need to pay for the pro version of wix which will cost about three hundred for two years. Next building and implementing the website, calendar, and jobber is all free. If the owner does this work himself then he can come out of this project only spending around $360 dollars. For who will use this it will be the consumers that need to make reservations and the receptionist. The receptionist is in college and probably has enough brain points to use a calendar which aside from answering the phone which was her previous job nothing else has changed. So, there shouldn’t be any training on how to use a calendar. Post implementation the admins of the site can use the user data they are collecting for targeted adds and to see who is making the most reservations. Finally, we need to ask ourselves does this project reach the original business goal stated in the beginning, and the answer is yes.

Now for maintaining the system. Luckily for us or the company we have outsourced for everything. This means that google calendar is updated by google adding new features to stay with the times. Also, jobber is another third-party that is updated by the company itself. Finally, it is the same for wix, the website. The company will continue to update its servers and add new features for us to use in the future. This job could not have been set up any easier. Granted, the only real thing that need to be added aside from basic communication with the receptionist was the ability to get information about rental patterns, customer profiles, and advertising effectiveness. Two out of the three could have been done by communication with the receptionist.

Overall the project is going to be easy all around to not only create but also to use. From the consumer interface to input reservations or to the admin side where the owners or receptionist will have control to view the calendar. Maintenance will be as easy as logging in and pushing a few buttons. Microsoft Access had an upfront cost of four hundred and twenty dollars and not monthly cost. This new method costs slightly more and in the long run will cost more money but if the owners wanted to, they could replace the receptionist all together which would save some money. They could move the entire system online and forward all the phone calls to the owners saving themselves an entire salary. On top of that with this new design and layout of their new system they have far more room to grow. With a website the possibilities are limitless in creation and they can have whatever they wish for. This could help in the long run with advertising.