**Charter Fishing**

about the database technology

This database system will be run and put in place by a charter fishing company. Typically, the system should be interfaced with by a standard desktop computer. It is not exactly necessary to modify or even view the system at all when the employees and captains are out on the water. It’s primarily intended as a type of inventory system and a way to more easily interface with groups of customers who want to go, well, fishing. It also lets the company keep strong tabs on where their boats are, who captains those boats, and the equipment aboard. At this time the system is never storing binary data, and as such will actually occupy very little storage space on a computer system’s hard drives. So this also answers the questions about performance issues: there will hardly be any! Now, if the charter fishing company was to grow in size and they expanded and built an office in another town, network connectivity would become a necessity. However, every branch could potentially just run and manage their own completely independent database.

software and hardware necessities

Our charter fishing database system has pretty simple hardware requirements. It could literally run completely on a single computer in a backroom (or even a closet) of the office. It’d just need a network connection and occasional maintenance work. This means that potentially the company would need to have ethernet wires run throughout the office – a small installation fee to think about. Being a system that’s running a database, it’s important that all of the data stored on it is very secure and very redundant. A simple RAID 1 array should be used internally, in addition to maybe an external drive, on top of an uninterruptible power supply feeding the machine’s electricity hunger.

Database systems are very friendly towards Linux installations, and as such our whole entire set up could be run with nothing but completely free (and open source) software. But if the charter fishing company client preferred the familiarity of Windows, well that’s definitely doable too for very little extra cost.

access privileges

Some parts of the database should not be editable by standard cashier people. This means that the database should require some access controls that give certain users lower or higher access than others. Regular, low level users should be able to easily interface with customers. This means that they’ll definitely need both read and write access to the GROUP table. This way when customers come by the office to purchase and plan a charter fishing trip, the cashier will be able to insert their information and the fishing trip that they’d like to go on into the database. These types of transaction could easily be developed into a set of canned transactions.

There are, however, many tables that a regular user should not be able to access. The CREW\_MEMBER, DOCK, BOAT, or MOTOR tables are examples of this. Only management level employees should really have access to that type of information. And note that this is in reference to not only write privileges, but also definitely read privileges too.

more on groups

Groups, when evaluated alone, alone aren’t an extremely complicated part of the database. They only have a few attributes, like their size and the date that they want to go fishing. But they have more to them than that! Each group has a captain that they can request in addition to a particular fishing trip that they can request. This means that the GROUP table is actually very informative for the charter fishing company.

crew members

These seamen are the primary work force of the charter fishing company, as they’re the ones who do the main attraction of bringing groups of customers out to catch the fish. As such, they have a bunch of their information stored in the database. Their essential information is all stored, such as their social security number, their pay, and last but not least, their name!

Also stored in the database is the fact that there are actually two types of crew members. There’s a skipper and a captain, and each boat outing actually requires that both of these types of people are all aboard.

the guts

This section talks about the potentially most important part of the database: the actual fishing spots! Captains and skippers (well, probably more precisely crew members) should have access to the LOCATION table. This way they can insert the good fishing areas that they discover into the system, which would allow their brethren fishermen to check the locations out themselves. This table has attributes for the spot’s GPS coordinates (latitude and longitude), so communicating exactly where the spot is to other anglers is very easy.

An additional cool factor here is that crew members can even mark a set of locations as their favorites. This is another relation situation, and an angler can either have many favorites or none at all.

the boat

Many details are stored about the actual boats in the charter fishing company’s fleet. The boat’s BIN (boat identification number), maximum person capacity, footage length, and actual type are all ready to be found in the database. Type specifies the water that this boat is best suited for, such as inshore, offshore, or freshwater.

The BOAT entity has the most relationships out of all of the entities in the database; there are three of them! The first allows the system to manage exactly what fishing poles are aboard the boat. The second makes it so that users of the system can check and see which wells the boat has – these are used for live bait purposes. And finally, the last one permits system viewers to view what motors are currently in use on the boat. Being a charter fishing companies, having back up motors is very important, and this allows us to see which motors are in active use versus which are idling in the storage warehouse.

conclusion

Fishing, being one of those hobbies that many consider to be outdoorsy-type hobbies, is a market that’s just perfectly ripe for a bit more technology! If the charter fishing company were to really enjoy the database system, then they could potentially continue to do business with our software development company, and maybe even request mobile apps for the boat crews to use when out on the water. Business is looking good!