

# Software System for VIAPets

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## The Case for SEP1, Autumn 2024

We have been invited for an interview at VIAPets, a combined pet shop and kennel in Northern Europe, owned by retired football manager Bob Oldenuff. We have previously made a software system for him to help him with his previous career. Since he has contacted us to make him another system, then he must have really liked the previous system, and is putting his trust in us again.

## The Interview

***"Hello Mr. Oldenuff. Nice to meet you again."***

Mr. Oldenuff: Again? Do we know each other?

***"We made a nice software system for you a few years ago. Isn't that why you contacted us?"***

Mr. Oldenuff: No, I found you on the Goggle. I think it said you have some PRO developers, so that sounded like a good thing.

***"Oh, well we made the system you used to keep track of things the last years of your manager career. Didn't you say you really liked that system when we delivered it to you, Mr. Oldenuff?"***

Mr. Oldenuff: Oh, yes. That was an OK system. Well, I guess we are all friends here then, so no reason for all the fancy stuff with "Mr. Oldenuff", you can just use my first name, so "Mr. Bob" is fine from now on.

***"Well, OK, Mr. Bob. Tell us a little about your business. Knowing the problem domain is always important."***

Mr. Bob: Originally, I opened this as a normal pet shop, where we sold a few different kinds of pets. To keep things simple, I just called the shop "Pets". The shop was doing OK, but not more than that. Then there was a bit of a pandemic, and while I feel very sad about all the dead people, then I must say that it was great for business. Lots of people had to stay at home during lockdowns, realized how lonely they were, and decided to buy a pet for company. So business was thriving. Sadly, as good vaccines started to appear, all the lonely people could start going back to work, felt less lonely, and sales dropped a lot.

***"I see."***

Mr Bob: Then recently, I had quite a good idea, if I should say so myself. All these people, with their new pets, might sometimes now want to go on holidays, or perhaps have to attend business trips. Then what about the pets, I thought. Someone must need to look after them while they are away. That was my idea. Instead of only being a pet shop, we also started a kennel, where people can bring their pets and then we look after them while they can't themselves.

***"Smart."***

Mr. Bob: Very! This is also when I decided to change the name of the shop to "VIAPets".

***"Why VIA Pets?"***

Mr. Bob: There is no space in the name. It's just "VIAPets". When I ordered the new sign for the shop, the price was insane, and they wanted me to pay for each character on the sign. Apparently, for some people even a space is a character, so I saved some money by removing the space from the name.

***"OK. So why VIAPets?"***

Mr. Bob: With the new kennel business, I wanted everyone to know that here we treat every pet as a VIA.

***"VIA?"***

Mr. Bob: Yes, VIA - Very Important Animal.

***"Of course! I have always wondered what that means. Makes perfect sense. Then now you want us to make a software system for the shop and kennel?"***

Mr. Bob: Yes, I have realized that we need some more structure to the way we do business. With just the pet shop, things have been fine without any need for fancy software. We had the pets in the shop, we had a price tag for each of them, and when a customer bought one, we asked them for a few details, like their name and contact information, they made the payment, and that was it. Now things are not so simple anymore. We cannot have what happened last week ever happen again.

***"What happened last week?"***

Mr. Bob: It was terrible. I hired a new guy recently to help out at the shop. A customer came in and saw a chihuahua he liked. The new guy didn't see a price tag, but wanted to show me he was good at sales, so he sold the dog anyway. Even got a really good price! The problem is, it was a dog we were looking after while the owner was on a business trip! Ever since, I've heard customers whispering about it in the shop. Someone said something about how maybe I should just sell the shop and become a "Baha man" instead. I don't even know what that means! I've also heard several other customers talking about it, calling it the "Chihuahua catastrophe".

***"That sounds bad."***

Mr. Bob: Tell me about it. That Chihuahua was an angry little critter, but it was nothing compared to the owner when she came back two days later, and we all realized we had sold her dog. Luckily, as we keep contact information on the people who buy our pets, we called the buyer and eventually convinced him to let us buy the dog back. Normally, we keep the pets for sale separated from the pets in the kennel of course, but sometimes they manage to get out from the kennel in the backroom and into the shop. That's how it went wrong. This morning a poodle got into the shop as well, and I had forgotten it was one we had in the kennel, so I could have made a mistake with that one myself. That's what made me realize that we all need some help here at the shop. WE CANNOT HAVE ANOTHER CHIHUAHUA CATASTROPHE!

***“Definitely not. Or a poodle predicament. Maybe even someday an actual cat-astrophe?”***

Mr. Bob: No. The worst thing is that we should have known better. We don’t even have a lot of dogs in the shop, so it should have been easy to see that something was wrong. I guess that with sometimes inexperienced workers here, and my old head just not being what it used to be, then things can go wrong.

***“That’s understandably. I would have thought that there would be lots of dogs for sale in your shop, since it’s such a popular pet?”***

Mr. Bob: Oh, well you see, almost all dogs and cats are bought directly from breeders, so it’s not normally something you can buy at a pet shop. We do have some of each though, since I had another good business idea.

***“What’s the idea?”***

Mr. Bob: Well, some people need more than just a temporary kennel for their pets. They realize that they simply bit off more than they could chew, and keeping a dog or cat is simply too much for them. When I hear about a case like that, then I offer to take the pet off their hands, and if they agree, then we add the pet to the pet shop and hope to sell it to a more suited owner.

***“That sounds like a good idea.”***

Mr. Bob: Yes, I think so too. I got it after noticing how all the kids these days always talk about wanting to save the world, and fix the climate, so I realized that if recycling is so popular now, then why not pets? I can proudly say that every dog and cat you see in my shop is 100% recycled! I’m actually planning on using that fact in an advertising campaign. It’s good to have something to set myself apart from my competitors.

***“Do you have a lot of competitors?”***

Mr. Bob: Yes, there are definitely some. There were already a few pet shops here in the city before I opened mine, and new ones have popped up since as well. A couple of boys who used to help out here at the shop a few years ago have even just opened their own pet shop down the street from here. If you go west when you leave my shop today, then you’ll see it almost immediately. Then there are also other kennels in the city that we compete with, but I think we are still the only business that is both a shop and a kennel.

***“That could be an advantage. I noticed that you are not selling any pet food? I’m sure I’ve seen other pet shops do that?”***

Mr. Bob: Yes, I know. Some of my competitors do that, and from what I hear it’s a really good way to earn some extra money. Right now, where we are still getting used to also running the kennel, then it feels like too much, but it’s definitely something I’m considering for the future.

***Well, let's talk about the system you want from us. In the shop, you have some pets. Let's start with those.”***

Mr. Bob: OK. Yes, we have pets of many different kinds: Some dogs and cats, as you’ve already heard about, and besides that also birds, fish, and various rodents like hamsters and guinea pigs. We even have an old turtle that seems to have been here forever.

***“That’s good to know, thanks. What kind of info would you need to store for those pets?”***

Mr. Bob: As I mentioned earlier, then we have a price assigned to each pet. We also keep track of other information, like the colour(s) of the pets, their age and gender, and for most of the pets we also give them a name. E.g. all the dogs and cats have names, most of the birds have as well, but only a few of the fish and rodents have. Even the old turtle has a name too: "Maturin".

There is also specific information that we only store for some pets. For the dogs and cats, we store their specific breed, and if we know it, then also the name of the breeder they originally came from. For the fish, we store their species and whether they are predators who might eat other fish if we place them in the same fish tank. Oh, and we also really need to keep track of whether they are saltwater fish or freshwater fish. Do not ask me how I found out that some of that fish information is really important!

***“I don’t really think I need to ask... Anyway, what about info about the rest of the pets?”***

Mr. Bob: For the birds, we store their species, plus sometimes their preferred type of food – some of them can be quite picky with what they will eat. For the rodents, we also store their species, plus I’ve started keeping track of whether they bite my fingers when I try to feed them. Some do, while others are safe to deal with. That last part is not something the customers should ever see of course, but for me it’s useful information.

Then there’s our old turtle of course. He’s the only one of those we’ve had so far, but from time to time there have been a few other various pets here, so if possible, then maybe your system could just have a kind of “various” category for them? Maybe store their species, and have a place where we can also add a comment with whatever additional information, we think it’s worth knowing about them? Now that I think about it, then maybe it should be possible to store comments for all pets, not just the “various” ones.

***“Got it. We can do that. You said that when a customer buys a pet, you store info about the customer?”***

Mr. Bob: Yes, we like to be able to contact them, if necessary, which it sometimes is as you’ve heard. So, we ask for their name, phone number, and email address, and register that. For the sale itself, we register which pet was sold of course, the date and time of the sale, and the final price. As you know, the pets already have a price set, and in most cases that’s the price the customer will pay, but sometimes we might give a discount, so the final price could differ from the pet's official price.

***“OK. So, in the system, you would like to be able to store all this info too. What about payments?”***

Mr. Bob: We have a system for that already, so your system doesn't need to deal with the actual payments, just keep the information I have already told you about.

***“We’ll do that. Then you also have the kennel part of the business. How does that work?”***

Mr. Bob: It's simple enough really. If someone wants us to take care of their pet, they contact us, and if we have room, then we create a booking for the pet. All we need to know is who is making the booking, the period where they want us to look after their pet, and some information about the pet.

***“What info are you storing about these customers and pets?”***

Mr. Bob: The same as for the regular customers and pets basically. Often, the ones using the kennel know us from having bought a pet here, so we already have their information stored. In case it's someone new, then we just register them as a customer first, and then create the booking. For the pets, then we don't set a sales price of course, but else we store the same information as for the pets that are for sale. Sometimes the pet was bought here, which again makes things easier, since we then already have most of the information about it registered. It will be VERY important in the system though, that those types of pets are separated somehow, so we can't mistake the two!

***“Definitely not. What about the price for a kennel booking, since it's not stored for the pet?”***

Mr. Bob: We keep it simple for now: A flat rate of 20€ per day, regardless of type of animal. Things might change in the future though, so don't set that as a fixed unchangeable price in the system. I would like to just be able to enter the price of a booking myself.

***“No problem, and what did you mean by “if we have room?”***

Mr. Bob: Oh, the backroom is not that big, so at least for now, we only have room for a maximum of 10 pets in the kennel at a time. That means, if someone wants to make a booking, then we only accept it if we can do it without at any time during the period end up having more than 10 pets at the same time.

***“Do you accept all kinds of pets in the kennel?”***

Mr. Bob: Actually, for now it's only dogs, cats, and birds. Maybe someday more, but for now that's all.

***“OK. I think we are starting to have what we need to make the system. Just out of curiosity, how many pets do you have in total in the store part of your business?”***

Mr. Bob: If you had asked me yesterday, then it would have been 70, but unfortunately, I noticed this morning that one of my favourite goldfish had died, so now it's one less.

***“Not nice!”***

Mr. Bob: Tell me about it. Goldie died. I loved that fish. She's the only one of them that even remotely looked like she was paying attention when I was trying to get the pets to dance!

***“Sorry to hear. Wait what... you tried getting the pets to dance?”***

Mr. Bob: Yes. I wanted to get some more customers in the shop, and figured a good way might be to get some kids to nag their parents about getting a pet. So, I looked around on the internet, and found a website clearly made for kids - I think it was called TicTac. Apparently, that has a lot of dancing going on there, so I thought to myself: Why not teach the pets to dance, and then put them on the TicTac for the kids to see? If I could teach a bunch of hopeless people to play football in my previous career, then how hard can it be to teach some pets how to dance?

***“Hard?”***

Mr. Bob: Yes, apparently so. The dogs didn't seem to get what I was doing, the cats didn't seem to care, and except for poor Goldie who I could swear was moving her little tail to the music, it was like the fish just completely ignored me when I was talking to them. So, even though I still have a little hope for the birds and rodents, I have decided to ignore the TicTac website for now, and instead get my own website. Actually, do you think you could also make one of those for me?

***“Yes, that might be possible. What should be on the website?”***

Mr. Bob: Well, I'm thinking a general introduction to the business and maybe a bit of our history. I would also like to have some information about some of the pets we have for sale - maybe even some photos of them, if possible. You could also add a page with the staff we have working here, with photos too. For the kennel business, then I think the website should at least show whether we have room for any more pets at the moment. If you can show more fancy information from the system, then that's very much OK with me as well.

***“That sounds doable. So, you don't want people to be able to buy pets online, or make bookings for the kennel on the website?”***

Mr. Bob: No. I prefer to interact with people directly. I know I'm a bit old fashioned that way, but I want to handle these things myself on my own computer that I will have at the shop. People can call me or come by the shop in person, if they want to do those things. Then I, or one of the other people working here, can enter the information on the computer.

***“Nice, then we can make a cool login feature for the system, so each of you working there can have your own username and password, and we can keep track of who does what.”***

Mr. Bob: No! I have plenty of passwords to remember already. There is already a login on the computer and that is enough. Whoever is at the front desk, will just use the system on the computer. We don't need to know exactly who is doing what.

***“Oh, OK. One last thing. For the last system we made for you, we didn't use a database to store info. Do you want that this time?”***

Mr. Bob: I don't really know much about those kinds of things, but what you did last time worked fine, so just do the same again. Give me some screens on the computer that I can figure out how to use, with some fields, buttons, and whatnot, and then it's fine.

***“Great. Then we will store the data in some files again.”***

Mr. Bob: If you say so.

***“Well, we have a lot of work to do. We'll get started right away. When do you need the system to be ready?”***

Mr. Bob: A lot of people tend to travel to their families to celebrate Christmas, so there might be some pets to look after for them while they are gone. Could you have the system ready in time for Christmas?

***“That's not much time, but sure. We have PRO developers after all!”***