

The Pet-Sitting Planner Portal

By

James Hunt

Submitted to
the Faculty of the Information Engineering Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Engineering Technology

University of Cincinnati
College of Applied Science

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Date

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The Pet-Sitting Planner Portal

By
James Hunt

The Pet-Sitting Planner Portal: is a web application for pet-sitting business owners and their customers and employees. Software packages do exist that help pet-sitting business owners organize their essential business information. These packages do not share their information with the customers and employees. The sharing of employee, customer, appointment, services, pricing, and billing information differentiates from the available windows applications. The web application is an attempt to help everyone involved in pet sitting (owners, customers, employees, and administrator) have the necessary information needed to achieve business online. The tools created for *The Pet-Sitting Planner Web application* involved the latest web and database technologies: ASP.NET, C#, and SQL Server. The application was created for four distinct groups of people, business owners, customers, employees, and the web application administrator. Each group has their own area and tools that help them communicate and view important information. However all of the users have access to appointments, services, and reporting information, which allows them to share the current status of business.

Development of The Pet-Sitting Planner Portal

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1. Project Description

This pet-sitting portal allows business owners and customers to find each other and find information about pet sitting. The portal allows the owner to sign-in, schedule and confirm events, view billing history, view customer, employee, and pet information, and maintain a Web presence. It provides information to customers in need of a pet-sitter. It allows customers to sign-in, view pet-sitting business information, request appointments, and pay invoices. It also provides a sign-in, scheduling, customer, and pet information for employees.

Expandable Business

By offering tools that will allow the manager and employees to communicate over distance, the business isn't restricted to a geographical area.

Hiring Tool

By offering an online application the business can not only extend its hiring capabilities but also extend their geographical area. A person can also view more than one employment opportunity.

Portable Opportunities

By offering the online application, the owner of the business can leave town for an emergency or vacation and still administrate their business. A customer can schedule an appointment while out of town.

Billing Options

By offering billing reports it gives the customer an additional convenience in working with the pet-sitter. The customer can view his/her invoice at any time of day.

Continuous Scheduling Accessibility

By offering an online tool the customer, employee and owner can schedule and view appointments night or day.

Web Presence

By offering the "Pet-Sitting Finder", it not only makes it easier for a customer to find a pet-sitter, but it gives the business owner continuous Web presence.

Filing and Record Keeping

The application can hold all of the pet-sitter's business information and make it easy to access.

2. Problem Statement

When pet owners go out of town for an extended period, they may need someone to take care of their pet. They need a way of finding and scheduling appointments with a pet-sitter in their area. The Pet-Sitting Planner will allow pet-sitters and customers to find each other and schedule appointments online.

3. Architectural Design

The Pet-Sitting Planner is a Web portal with a database back-end. The application uses ASP.NET, XHTML, ADO.NET, C#, and SQL Server 2000. It provides pet-sitters and customers a secure way of communicating via the Internet.

ASP.NET and XHTML are used to create the user interface and controls. I have chosen this combination because:

- ASP.NET has power server controls that are used to create unique user controls.
- ASP.NET offers data controls such as DataLists and DataGrids to help users view, edit, update and delete information.
- C# and ASP.NET controls interface well with one another.
- ADO.NET makes it easy to connect user controls to SQL Server.
- SQL Server 2000 is an expandable database that will allow for heavy usage and data growth.

4. Software and Hardware Requirements

Software Requirements

- Visual Studio .NET
- Microsoft SQL Server 2000

Hardware Requirements

- Web Server
- Database Server
- Client computers

5. Budget

Development Tools	
Microsoft Visual Studio .NET 2002 IDE	\$1079.00
SQL Server 2000 Developer Edition	49.00
Deployment Tools	
Web space (500 MB)	
Data transfer (25 GB)	
SQL Server 2000 (25 MB)	
Web hosting cost / www.dietrick.com	
Monthly fee	20.00
Setup fee	25.00
128 bit SSL Certificate annual fee	65.00
128 bit SSL Certificate monthly fees	15.00
Hardware/Operating System	
Dell 2650 Inspiron Pentium 4	
1.4 GHz processor	
30 GB Hard drive	
256 MB RAM	
Windows XP / Internet Information Services	1499.00
	\$ 2734.00

All of the expenses involved in the Web application have or will be personally funded.

6. Deliverables

1. The Web application will allow pet-sitters and customer to find each other and conduct business online.
2. The Web application will be developed using ASP.NET, HTML, C#, SQL Server 2000.
3. Owners, employees, and customers will be able to register and logon to the site.
4. The Web application will have a secure login for the pet-sitting business owners, customers and employees. It will authenticate and authorize them to use the tools within there area.
5. The following task will be functional:
 - a) Unregistered customers will be able to find pet-sitters in their area.
 - b) Registered customers will be able to request an appointment with a pet sitter.
 - c) Registered customers will be able to view their invoice information.
 - d) Pet-sitting business owners will be able to schedule and confirm requested appointments.
 - e) Pet-sitting business owners will be able to store important customer, employee, and pet information.
 - f) Pet-sitting business owners will be able to print business reports.
 - g) Pet-sitting business owners will be able to assign appointments to employees.
 - h) Employees will be able to view their schedule and assigned appointments.

7. User Profiles

There are four user profiles: The portal administrator, the pet-sitting business owner, the employee and the customer.

Portal Administrator

The portal administrator has access to information that is helpful in tracking the pet-sitting business owners, customers, and employees. The portal administration section gives the number of employees and customers in each state. It also gives the number of appointments for each business. The administrator is able to take much of this information to research further development, find what geographical regions are most active, determine what time of year or months are most profitable, and which pet-sitting business owners are receiving the most business.

The portal administrator needs some computer and Web browsing ability. They also need analytical abilities to take the data from the Web application and use it to get to know users, pet-sitting businesses and the Web application as a whole.

The portal administrator's interface has basic Web interface characteristics, such as button and hyperlinks to navigate and fields for viewing information.

Business Owner

The business owner has complete power over all the business data, such as the employee, customer and business owner information. The business owner has the power to give the customers and employees access to the Web application by creating accounts

for them. They also have the ability to schedule and confirm appointments with customers, delegate appointments to employees, create reports and view billing information.

Many of the business owners are small business owners that have their own personal computers. The administrator will need at least six months Web browsing experience and the motivation to improve their computer skills, so that they can use the Web application efficiently on a daily basis.

The business owner's interface is the most robust and has basic Web interface characteristics, such as button and hyperlinks to navigate, fields for entering information, buttons to add, edit, or delete information, and calendars to add, edit, confirm or delete events.

Employee

The business owner through an on-line employment application hires the employee. The Pet-Sitting Planner provides an application for potential employees so that the owner can review and make their hiring decisions. If the person is hired and becomes an employee, the owner will make his/her site accessible, so that the employee can receive delegated appointments from the business owners. The employee has the ability to view their schedule, edit their personal information, and view their customer and pet information.

Many of them will be part-time employees with flexible schedules. The employees will also need at least six months of Web browsing experience and the motivation to improve their computer skills. They will need to use the Web application on the days they are scheduled to work or more.

The employee's interface will be less robust, but will also have the basic Web interface characteristics, such as button and hyperlinks to navigate, fields for entering information, buttons to add, edit, or delete information, and calendars to view events.

Customer

The customer's initial communication with the Web application would be the registration, log-on, and then the "Pet-Sitting Finder" functionality. Once the pet-sitter is found and they mutually agree to their business agreements, the business owner and customer can start using the web application. They have the ability to request appointments, add or edit his/her personal or pet information, view billing invoices and history, and a list of their confirmed appointments.

The customer will be someone that has long days at the office, someone that is going out-of-town, or someone with a very busy schedule (or all three). The customer will have a computer at home or at work that has low-to-medium Web browsing experience. They will only use the Web application when he/she needs to hire or find a pet-sitter.

The customer's interface will be the least robust, and will also have the basic Web interface characteristics, such as button and hyperlinks to navigate, fields for entering information, buttons to add, edit, or delete information, and calendars to request appointments.

8. Project Design

The project encompasses three areas of computing Web design, programming, and database development. All three of these areas are intensely used to create the Web application. Below are the tools and how they were used in the project.

8.1 Database Design and Development

The database used in the project is relational and contains both one-to-many and many-to-many relationships. The design enforces data integrity by creating the appropriate relationships. There are also dozens of stored procedures that are available for the application to help insert, edit, and add data to the database.

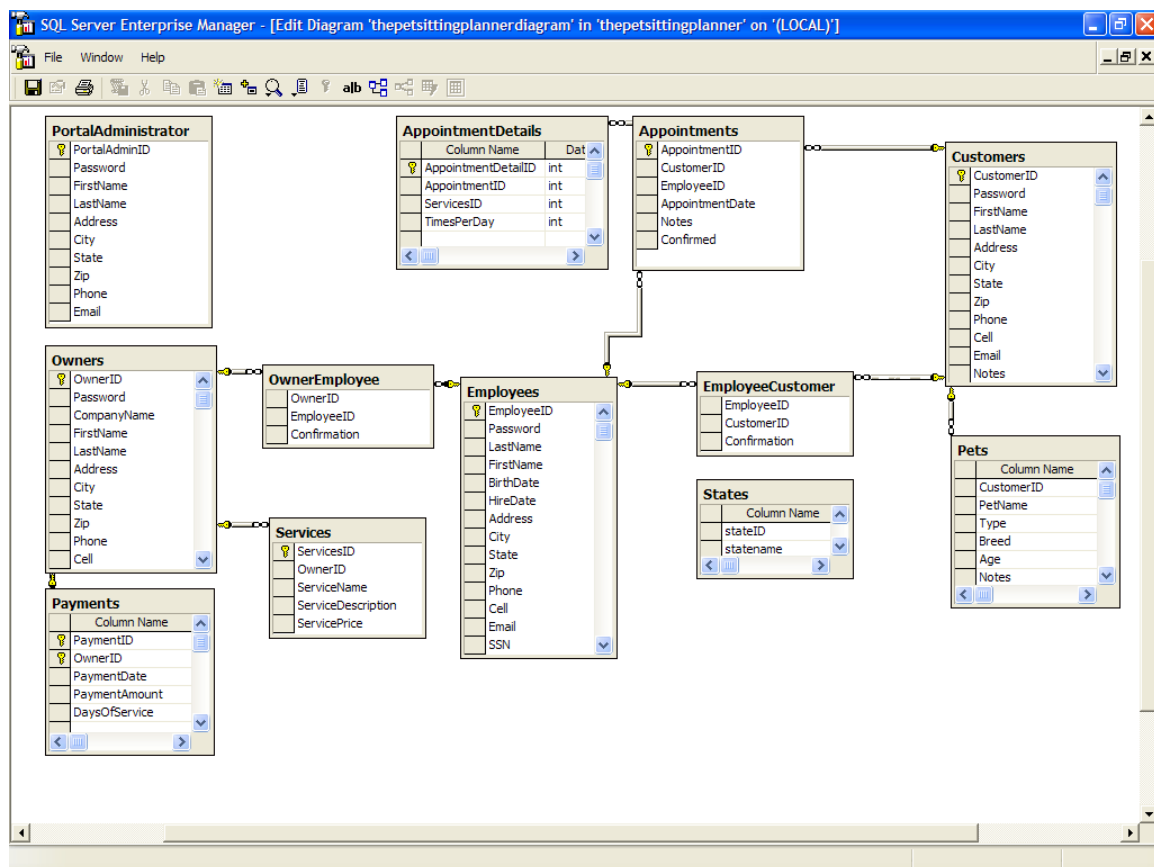


Figure 39. Database Diagram

The database uses concepts of normalization that eliminates redundancy and ensures proper dependencies. It avoids duplication of data by separating tables into main and subsets of information. The relationships are created to maximize utilization when querying data, inserting, updating, editing or deleting information.

8.2 Web Design and Development

The Web design will utilize both ASP.NET and XHTML. The user interface and controls will be created using mostly ASP.NET. The design will use standard controls such as labels and hyperlinks and complex user controls such as the combination of calendar controls, text fields and buttons.

8.3 Programming Design and Development

This application is using object oriented programming and ADO.NET to interface with the database. The programming involved creating namespaces, classes, and methods so that the application can reuse developed code.

8.4 Help Screens

Each page will have a help link that will lead the user to instructions, comments, or common concerns about the application. There is also a “Getting Started” page in each of the user profile areas.

8.5 Color Scheme

The color scheme was created to make a cool, calm, and professional feel. The blue and purple colors are used through out the entire application so that users would become familiar with the look of *The Pet-Sitting Planner Portal*.

9. Proof of Design

The screen design will involve five sections, the public, owner, employee, customer, and administration sections. Within these sections there are sub-sections that provide the tools each user will need to achieve business with one another.

I have included sample screen shots from each section.

Public Section

- Home
- Login
- Register
- Find Pet-Sitter

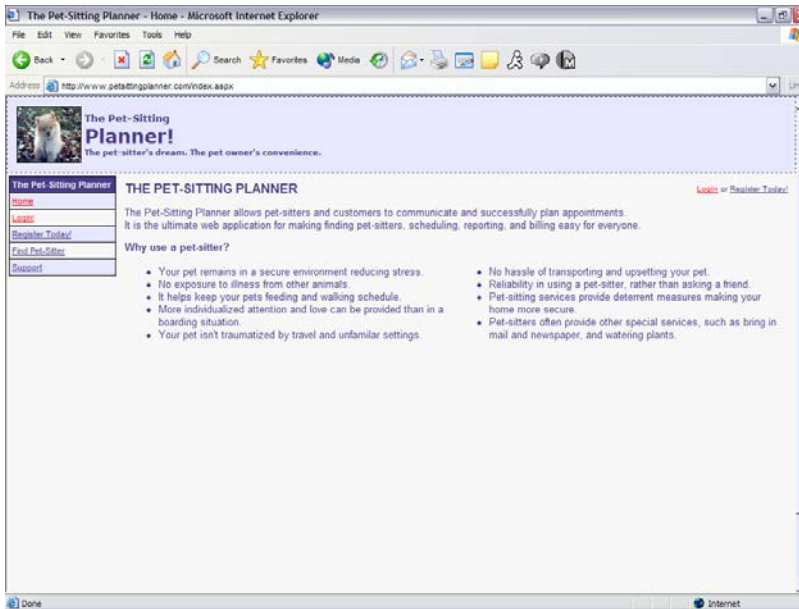


Figure 1. Public Section – Home Page

This form is the home page of the application. It is a simple and straightforward page to inform the viewer how important it is to use a pet-sitter and why “The Pet-Sitting Planner Portal” could help them in the process.

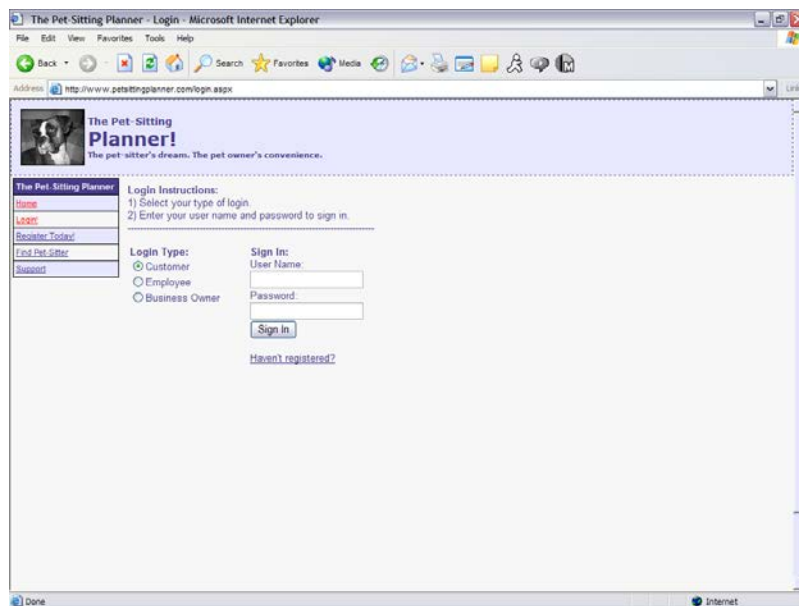


Figure 2. Public Section - Login

This is the login form for the customer, employee, and business owner. To login you have to provide the type of user you are and your user name and password. If the user goes to this page and hasn't registered they will notice the link below the “Sign In” button that reads, “Haven't registered?” urging the user to register.

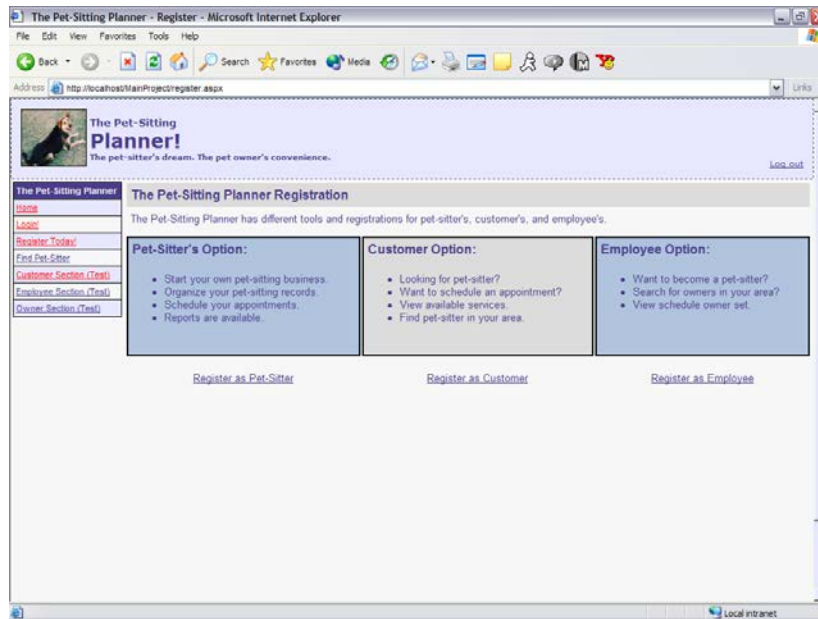


Figure 3. Public Section – Registration

This is the registration form where the user must first choose from either registering as a business owner, customer, or employee. Once they choose their registration type they will have to provide their personal information and security code to complete the registration. The security code prevents a malicious program from registering multiple times. The security code changes at the start every new session.

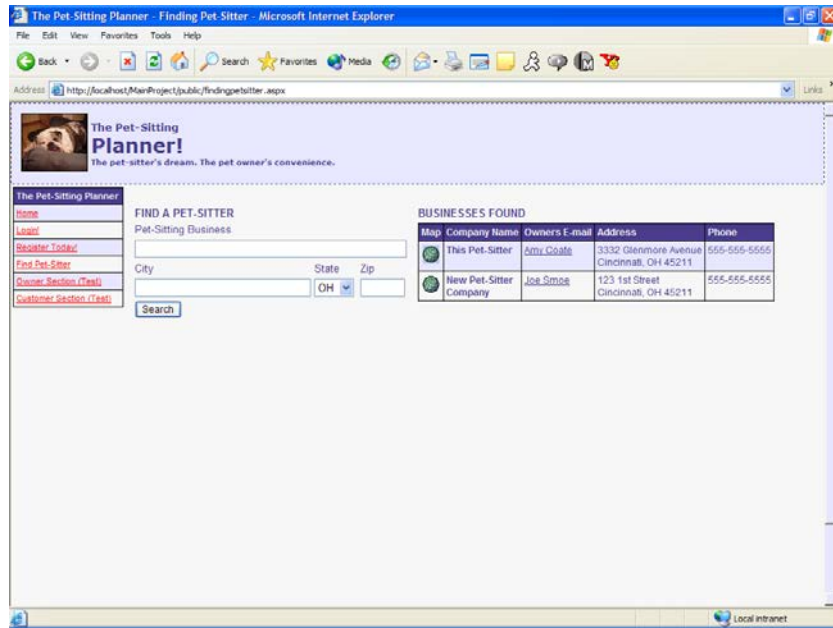


Figure 4. Public Section - Finding Pet-Sitter

This form allows customers to find pet-sitting businesses in their area. The information that is provided, in their search, is the company name, the business owner's name, address, and phone. The search also provides an icon that links to www.mapquest.com that allows the user to view the business owner's address.

Owner Section

- Employee Information
 - View Employees
 - Add Employee
 - Edit Employees

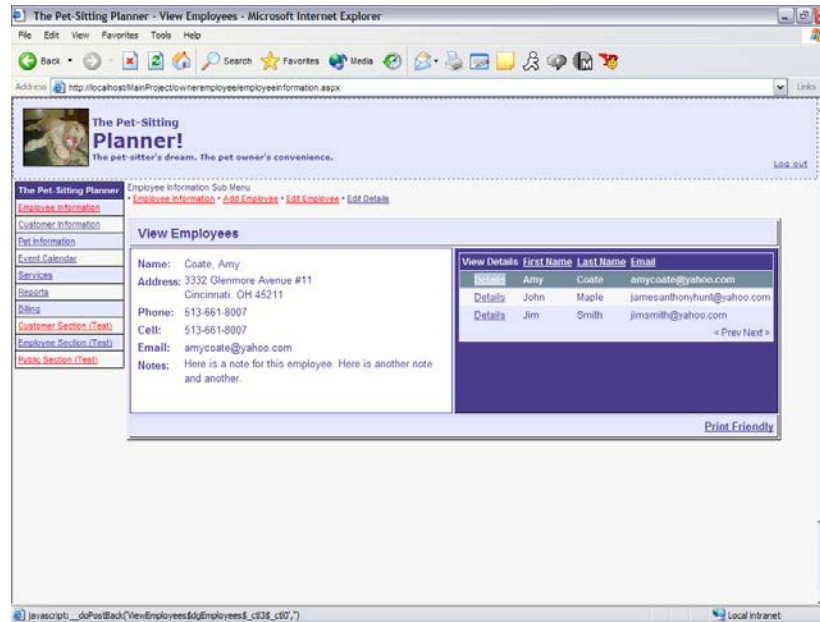


Figure 5. Owner Section – View Employees

This form allows the owner to view their current employees. On the right side of the page they can view the employees first and last name and email address. They can also click the “Details” link that will show additional employee information on the left side.

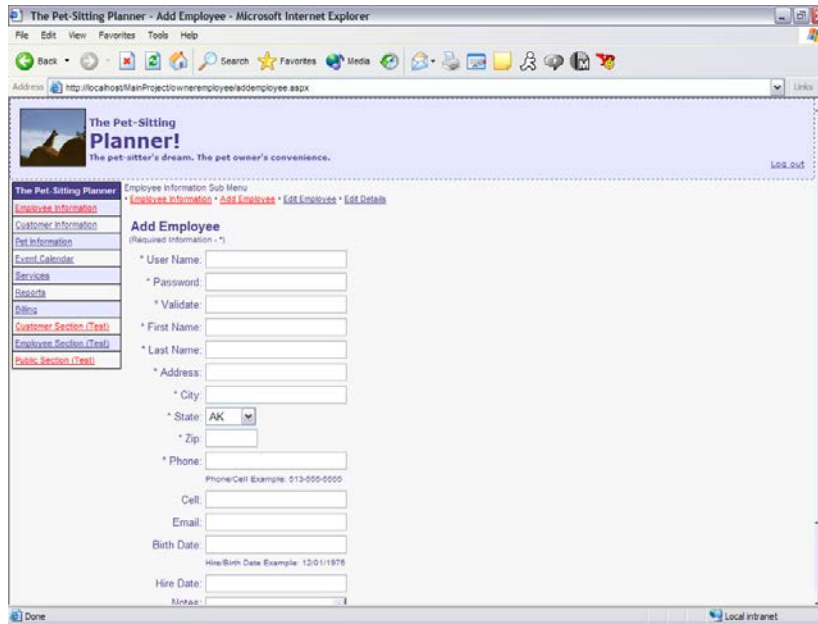


Figure 6. Owner Section – Add Employee

This is a form that allows the owner to add employees to their profile. If the owner provides an email address it will automatically send them an email to notify that they have been added to the web application and that they have access.

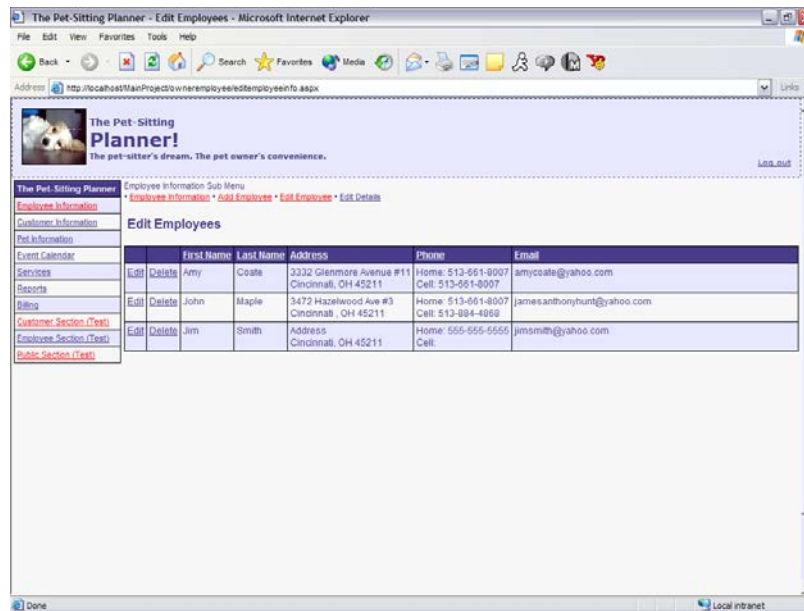


Figure 7. Owner Section – Edit Employees

This form allows the owner to edit or delete their current employees information. They can edit or delete information as easy as clicking on a link and by changing the text in the editable text fields.

- Customer Information
 - View Customers
 - Add Customer
 - Edit Customers

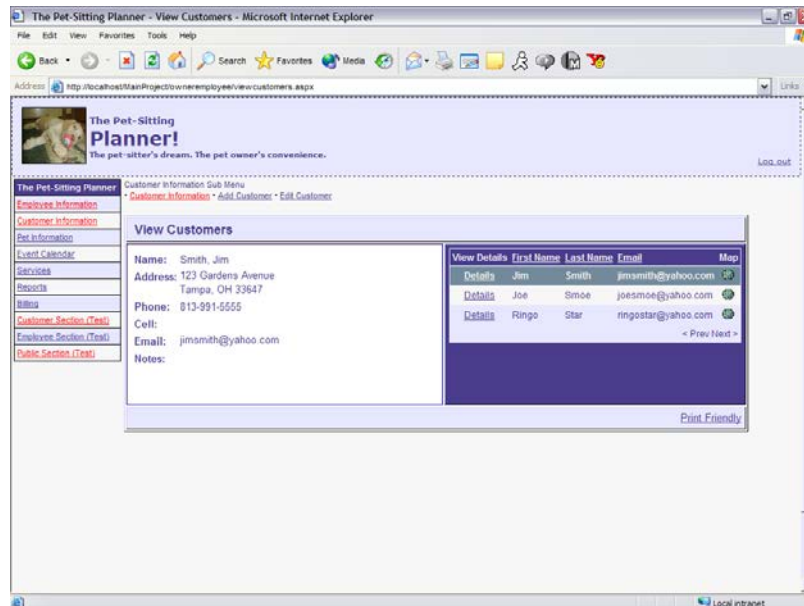


Figure 8. Owner Section – View Customers

This form allows the owner to view their current customers. On the right side of the page they can view the customers first and last name and email address. They can also click the “Details” link that will show additional customer information on the left side.

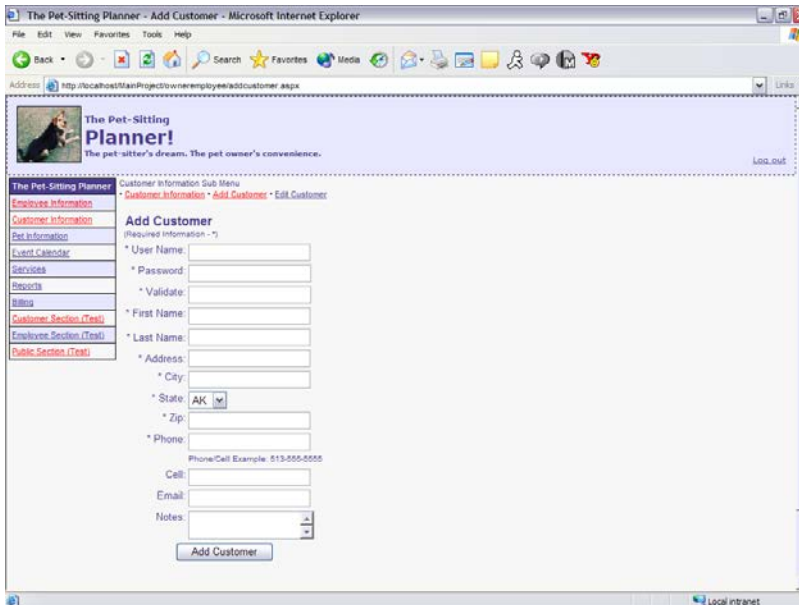


Figure 9. Owner Section – Add Customer

This is a form that allows the owner to add customers to their profile. If the owner provides an email address it will automatically send the customer an email to notify that they have been added to web application and that they have accessibility.

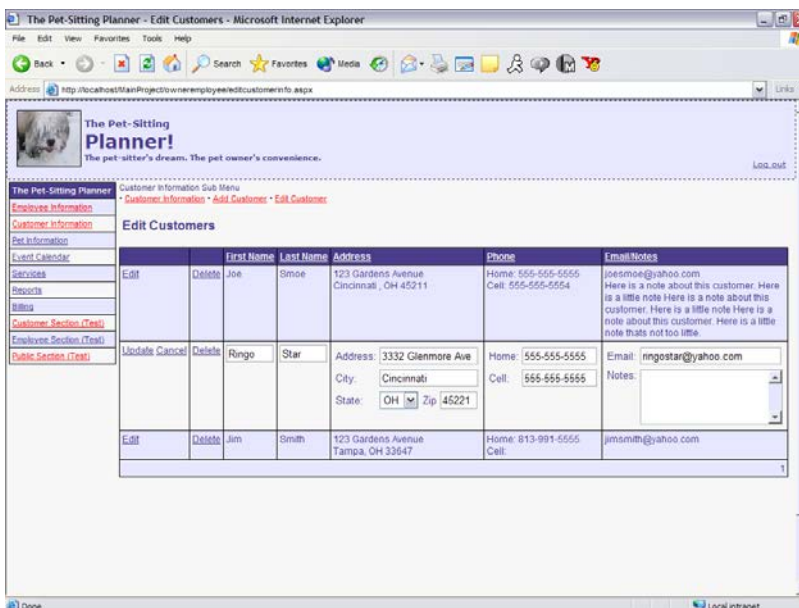


Figure 10. Owner Section – Edit Customer

This form allows the owner to edit or delete their current customers information. They can edit or delete information as easy as clicking on a link and by changing the text in the editable text fields.

- Pet Information
 - View Pets
 - Add Pet
 - Edit Pets

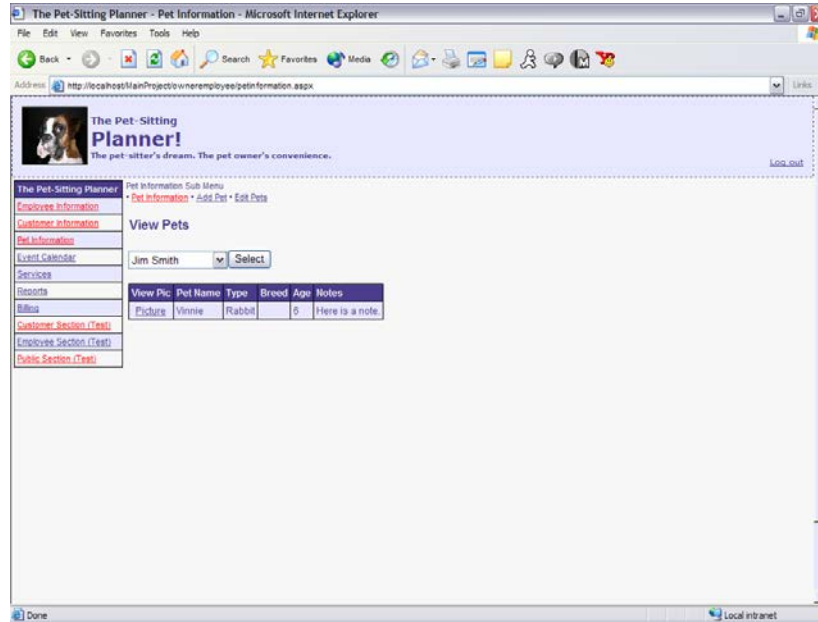


Figure 11. Owner Section – View Pets

This form allows you to view the pets associated with each customer. The owner would select a customer from the drop down list and it would display all of the added pets for that customer. If a picture was uploaded to the site for a pet then the owner could click the “Picture” link and the picture would display

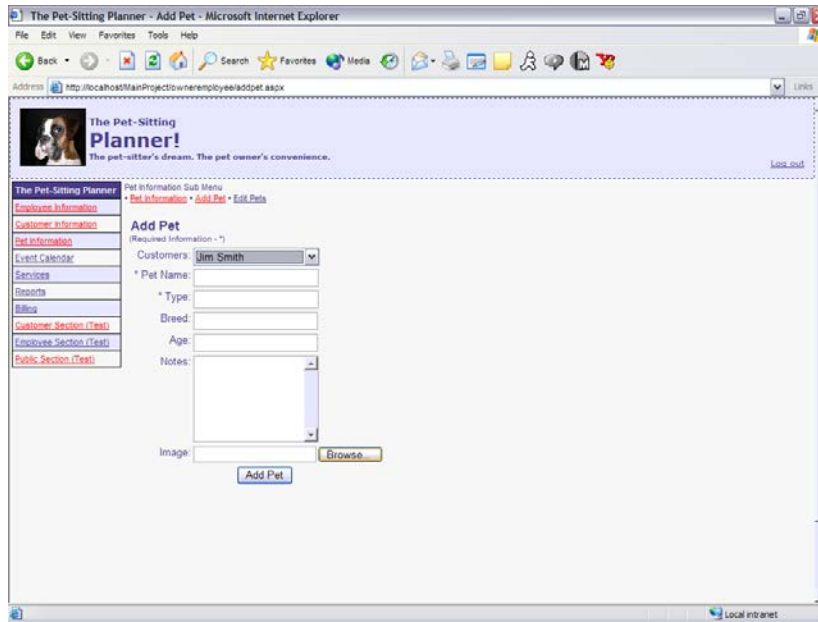


Figure 12. Owner Section – Add Pet

This form is so the business owner can add pets to their customers. The owner can enter the pet name, type, breed, age, notes, and an image of the pet. The image is uploaded to the database and is restricted to a jpg format.

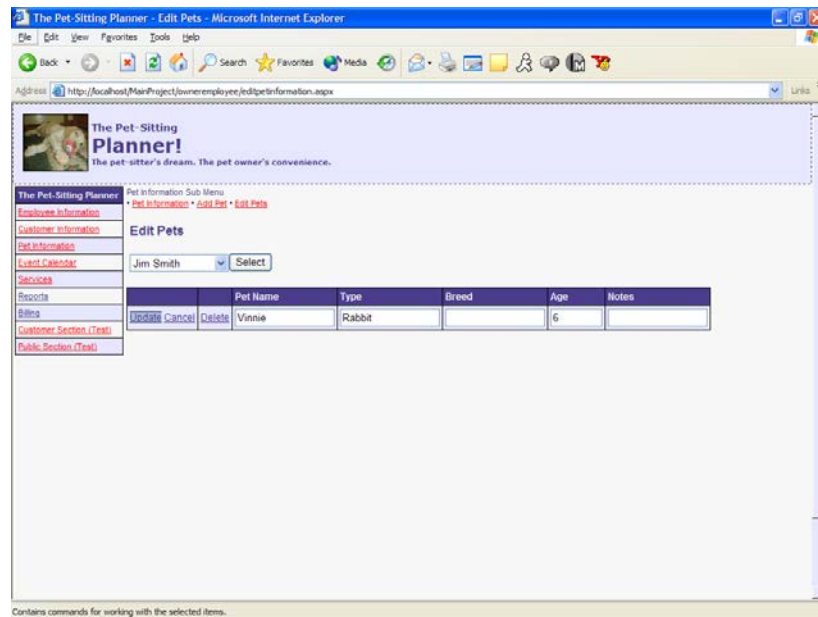


Figure 13. Owner Section – Edit Pet

This form allows the owner to edit or delete their pet information. They can edit or delete information as easy as clicking on a link and by changing the text in the editable text fields. They can do so by choosing a customer from the drop down list.

- Scheduling
 - Event Calendar
 - Scheduling Appointments
 - Edit Appointment
 - Unconfirmed Appointments

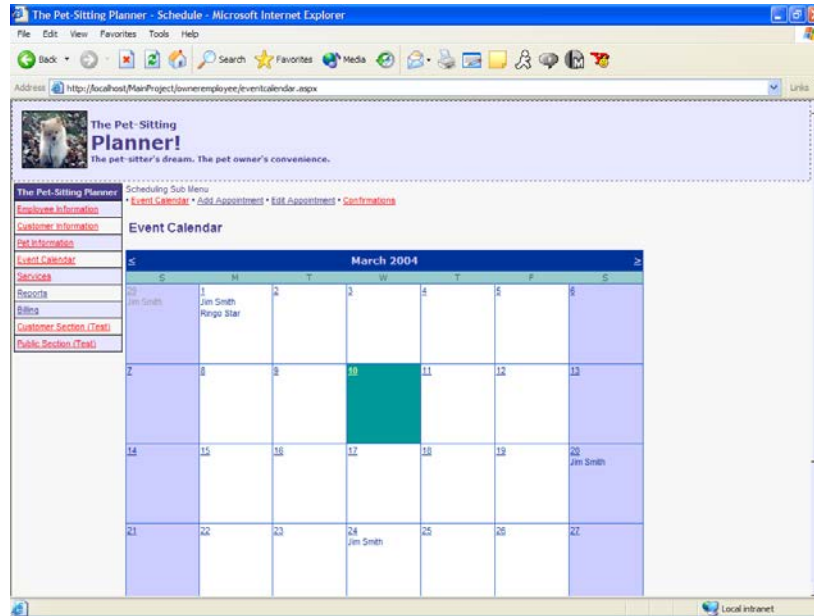


Figure 14. Owner Section – Event Calendar

This form is to display the owner's schedule. The confirmed appointments are displayed by showing the customer's name in green text. The unconfirmed appointments are displayed in red text. This allows the owner to reconfirm or edit their assignment.

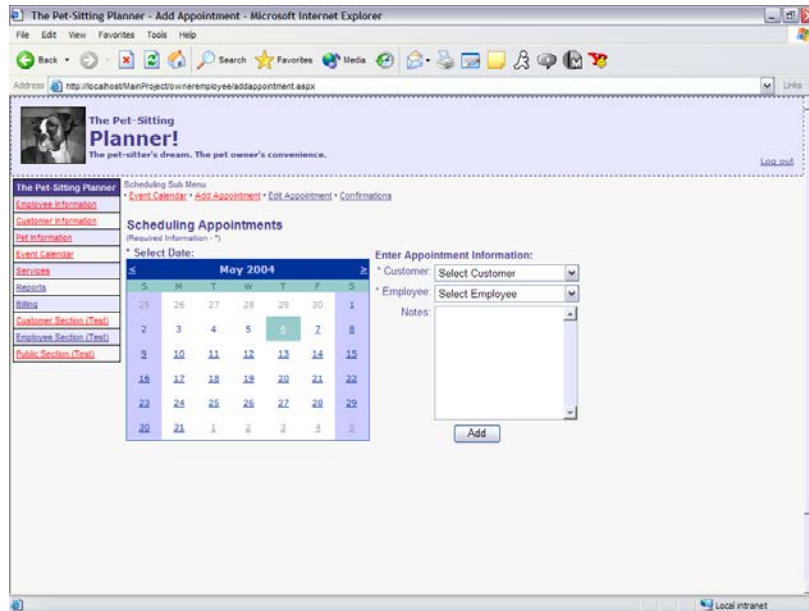


Figure 15. Owner Section – Scheduling Appointments

This form allows the owner to add an appointment to their schedule by selecting a date from the calendar, customer, and employee. If they choose to assign the appointment to their self then the appointment is automatically displayed as confirmed on their appointment.

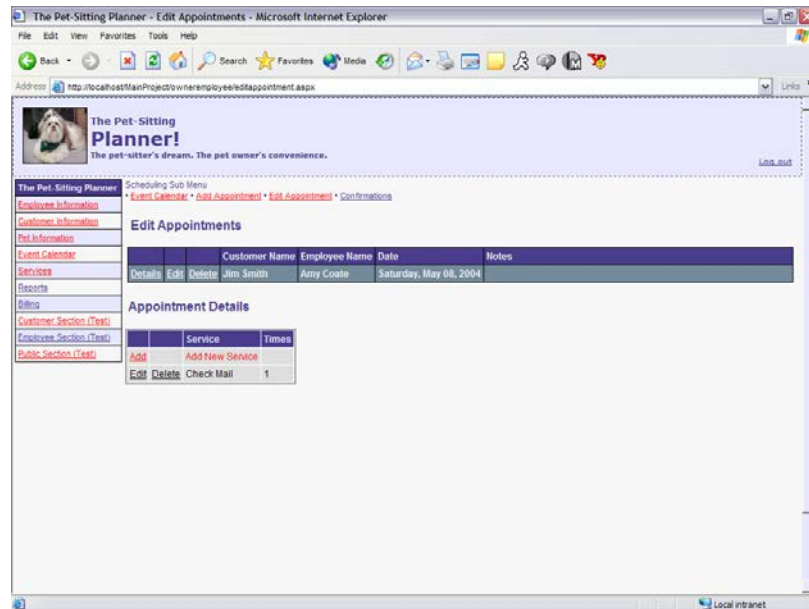


Figure 16. Owner Section – Edit Appointments

This form allows the owner to edit appointments that haven't been paid. The owner can edit the employee responsible for the appointment, the date of the appointment, notes. They can also edit the appointment by adding or deleting services.

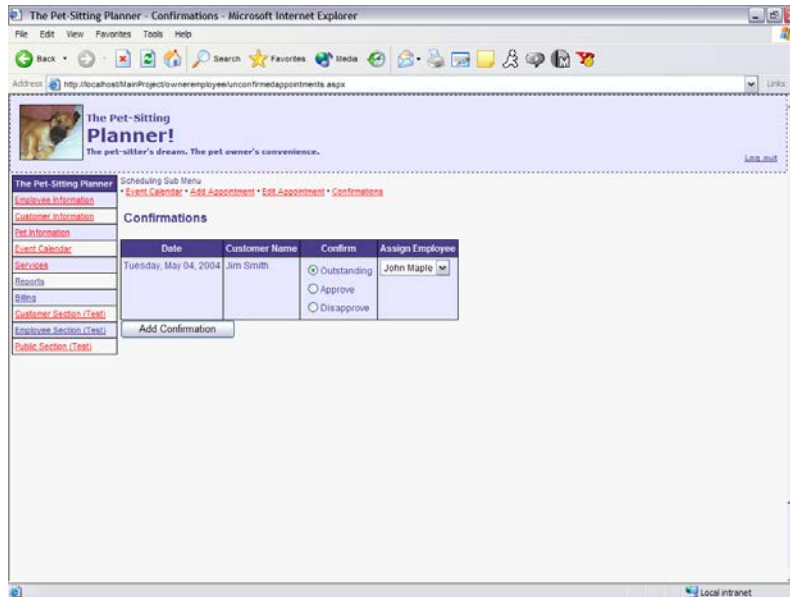


Figure 17. Owner Section – Confirmations

This form allows the owner to confirm appointments that have been requested by one of their customers. They can choose to approve or disapprove the appointment. If they approve the appointment they can also assign what employee is responsible for the appointment.

- Services
 - View Services
 - Add Service
 - Edit Services

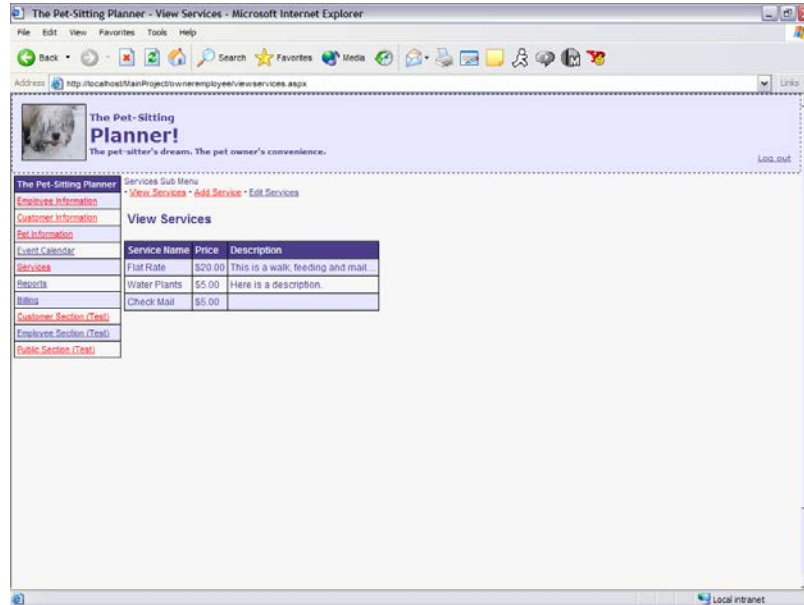


Figure 18. Owner Section – View Services

This form allows the owner to view the services that they have available online.

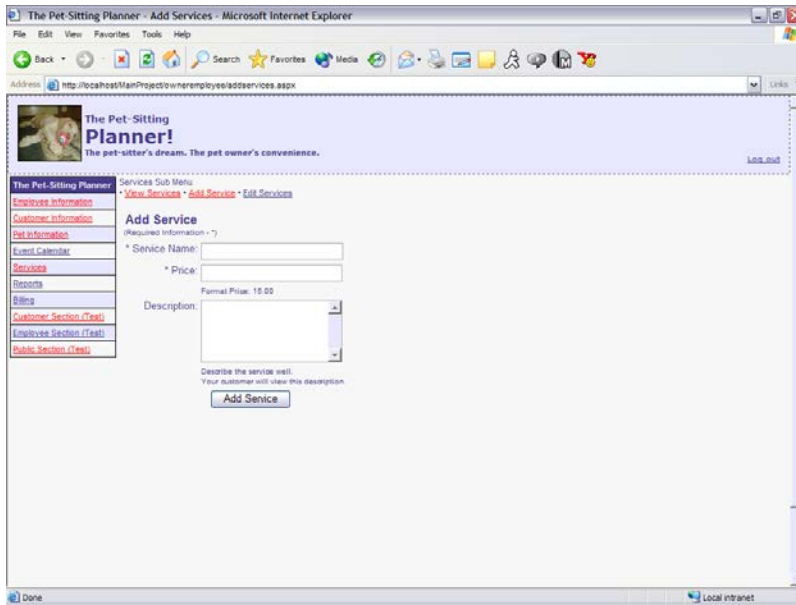


Figure 19. Owner Section – Add Service

This form allows the owner to add services to their business. These services are the same services the customers see when they add an appointment to be confirmed.

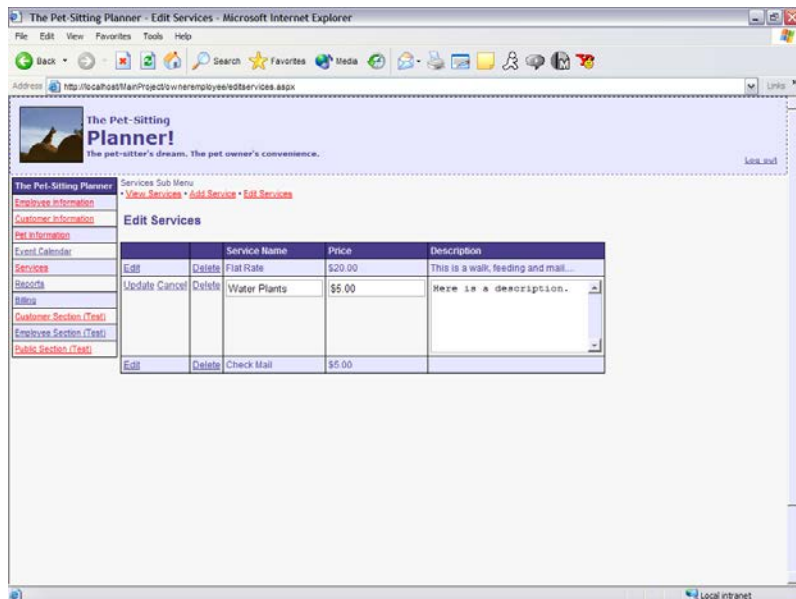


Figure 20. Owner Section – Edit Services

This form allows the owner to edit or delete their pet information. They can edit or delete information as easy as clicking on a link and by changing the text in the editable text fields.

- Reports
 - Owner Reports

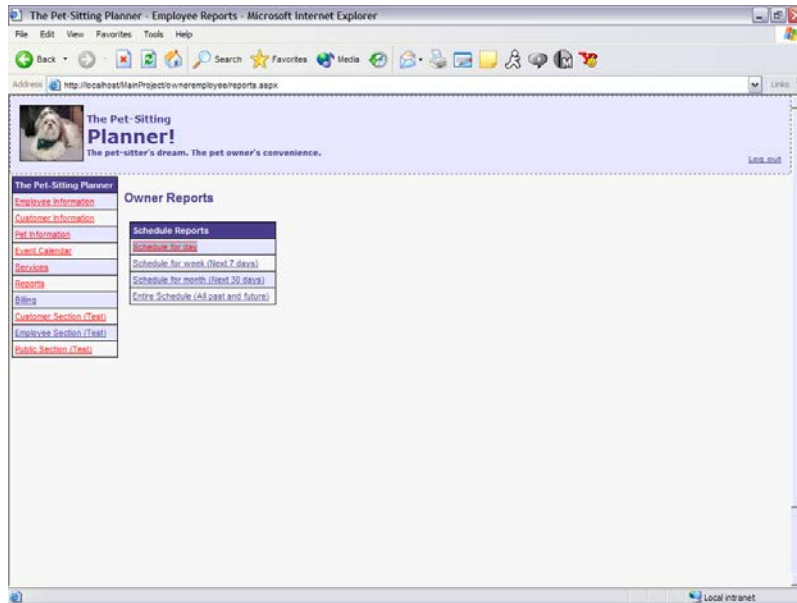


Figure 21. Owner Section – Owner Reports

This form allows the owner to print the appointments for the next day, week, month, and their entire schedule. The report shows the customer name, customer address, services requested, and how many times these services are to be given.

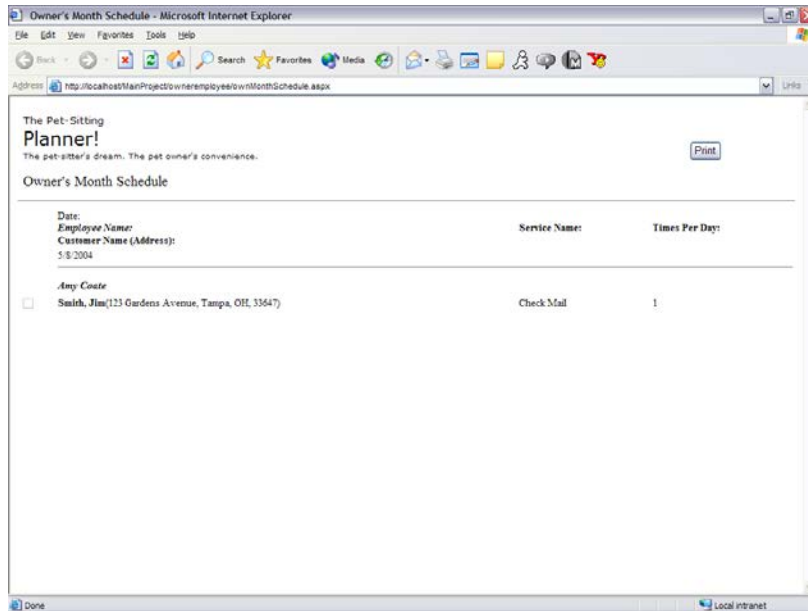


Figure 22. Owner Section – Example Report

This is an example of a report of the owner's month schedule. The report shows the date, the employee responsible for the appointment, the customer, the services, and the number of times they need to be done.

- Billing
 - View Invoices
 - Outstanding Invoices

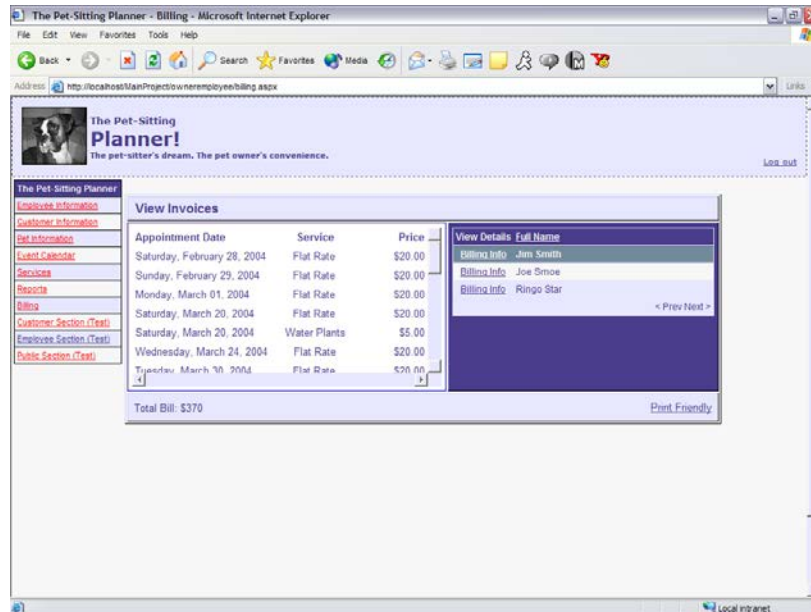


Figure 23. Owner Section – View Invoices

This is a form that allows the user to view the invoices that were sent to the customers. The owner can click the “Billing Info” link on the right side to display the appointment date, service, and price information on the left.

Customer Section

- Personal Information
 - View Personal Information
 - Edit Personal Information

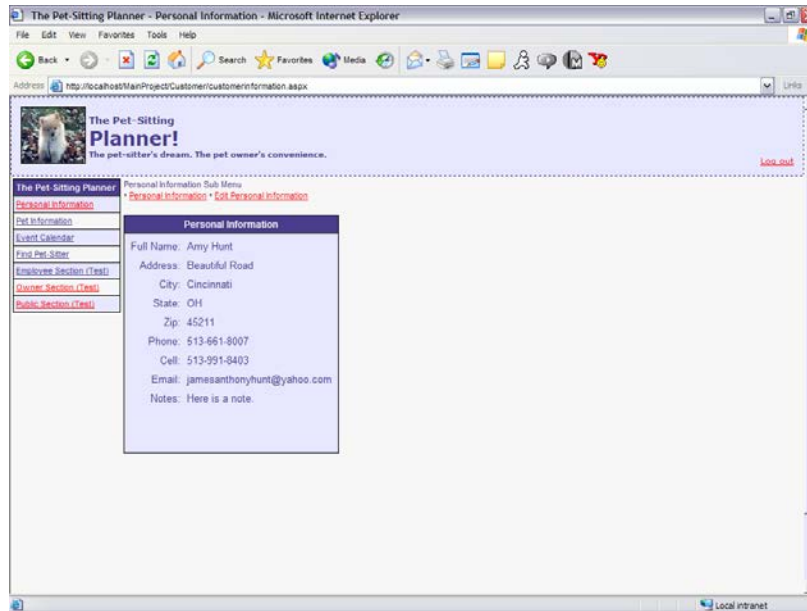


Figure 24. Customer Section – View Personal Information

This is a form that shows the customer their personal information.

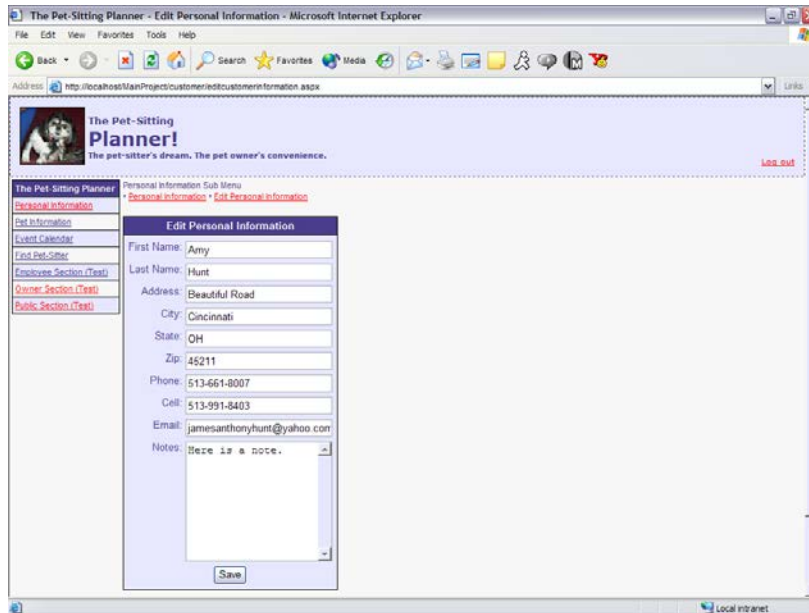


Figure 25. Customer Section – Edit Personal Information

This form allows the customer to edit their personal information. Once they have changed their information they can click save and they will be led to an un-editable view of their personal information.

- Pet Information
 - View Pet Information
 - Add Pet
 - Edit Pet

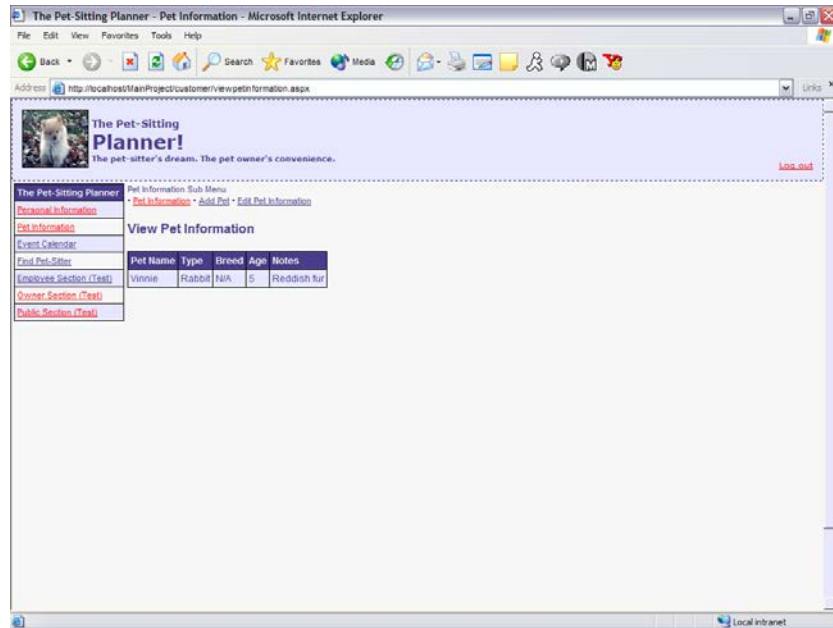


Figure 26. Customer Section – View Pet Information

This form allows a customer to view their pet information.

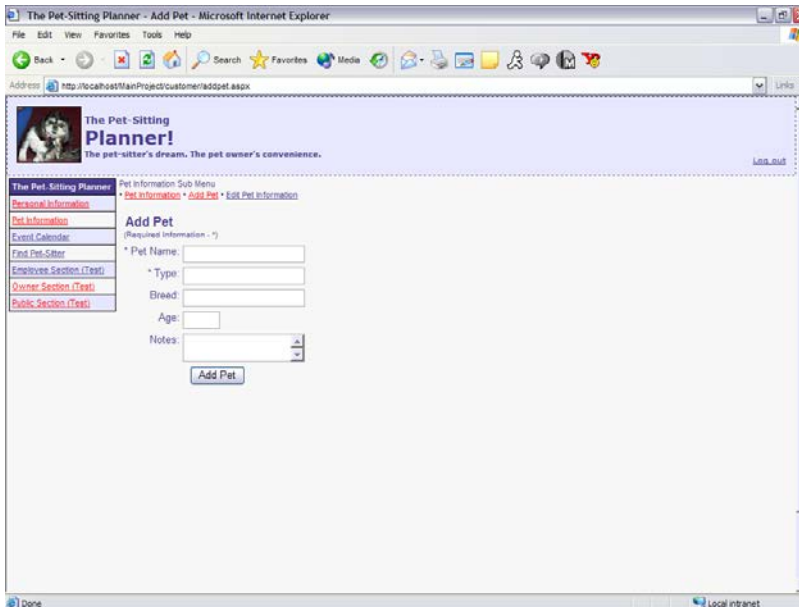


Figure 27. Customer Section – Add Pet

This form allows the customer to add a pet to their profile. This allows the business owner to know the details of the pets they are pet-sitting.

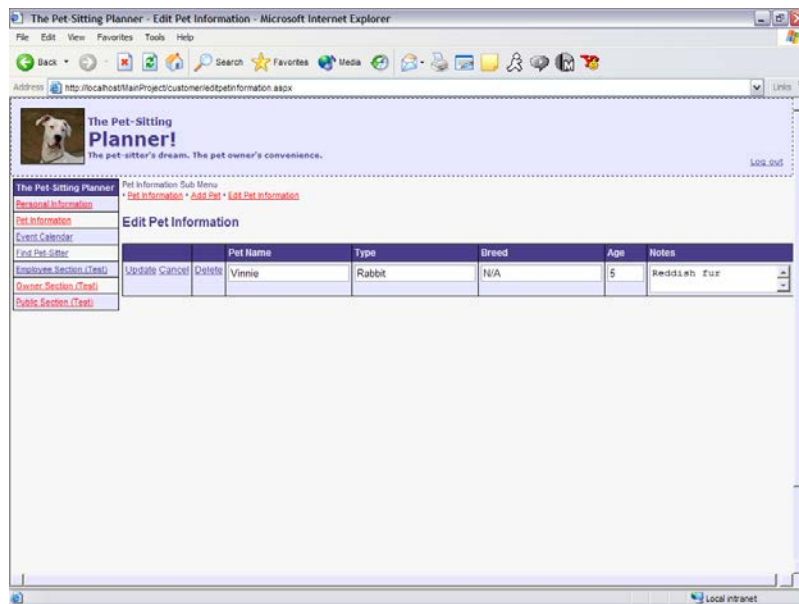


Figure 28. Customer Section – Edit Pet Information

This form allows the customer to edit or delete their pet information. They can edit or delete information as easy as clicking on a link and by changing the text in the editable text fields.

- Scheduling
 - Event Calendar
 - Scheduling Appointments
 - Confirmations

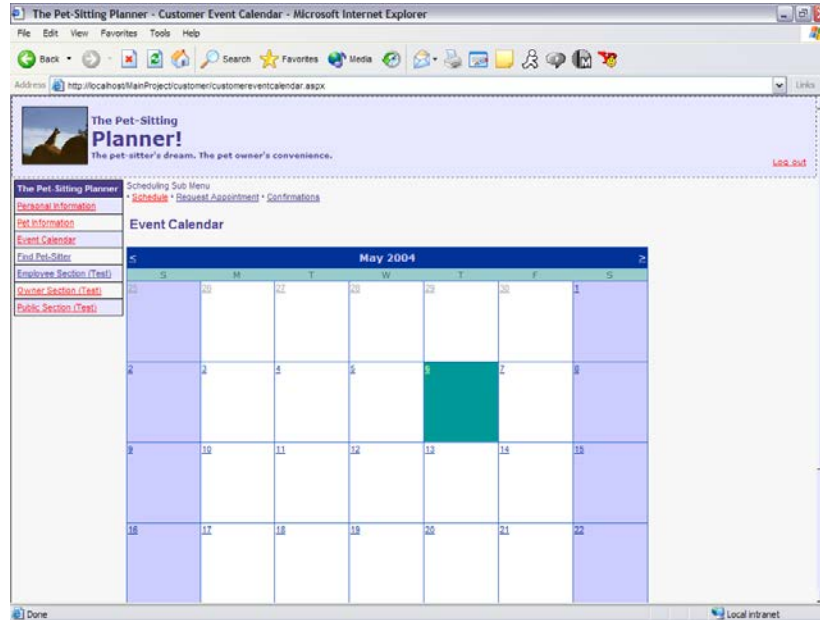


Figure 29. Customer Section – Event Calendar

This form is to display the customer’s schedule. The confirmed appointments are displayed by showing the company’s name in green text. The unconfirmed appointments are displayed in red text. This allows the customer to reconfirm or edit their assignment.

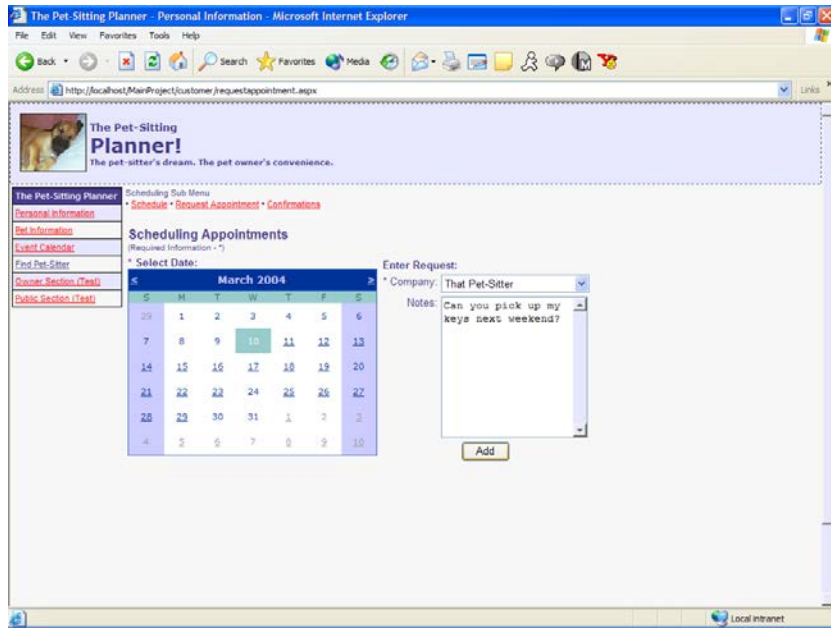


Figure 30. Customer Section – Scheduling Appointments

This form allows the customer to add an appointment to their schedule by selecting a date from the calendar and choosing a pet-sitting business name from the drop down list.

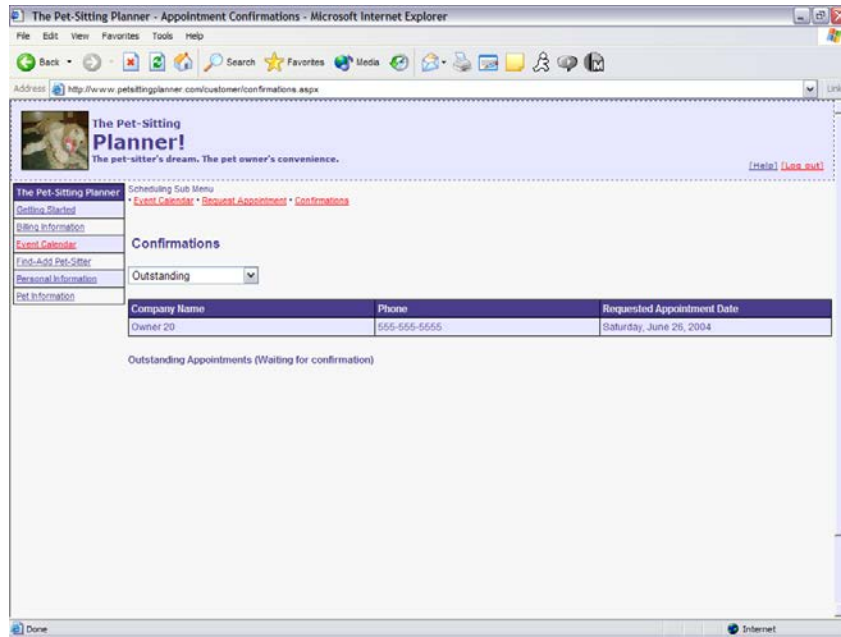


Figure 31. Customer Section – Confirmations

This form allows the customers to view the appointments that have been approved, disapproved, and outstanding appointments.

□ Find A Pet-Sitter

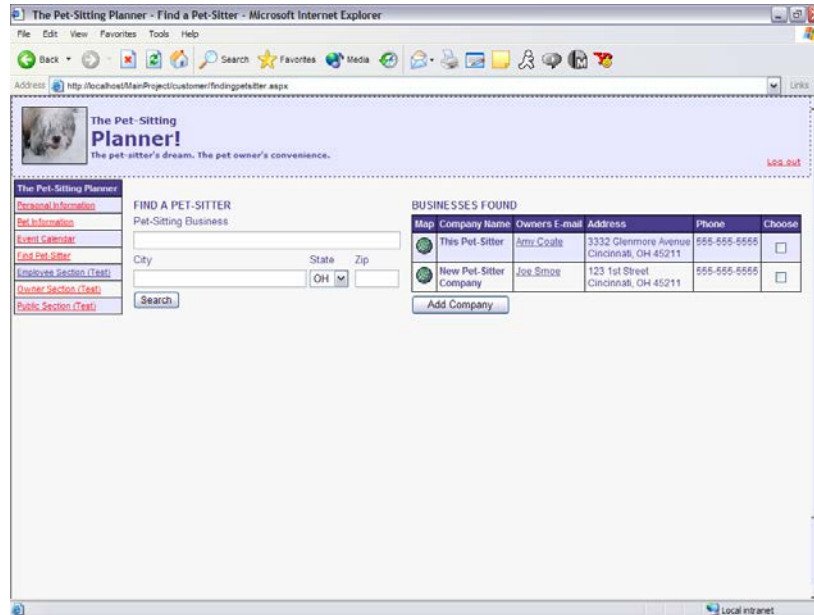


Figure 32. Customer Section – Find A Pet-Sitter

This form allows the customer to find and choose a pet-sitter in their area and add it to their profile. This allows the customer to choose from these pet-sitting businesses when requesting an appointment on the “Add Appointment” form.

- Billing
 - Unpaid Invoices
 - Paid Invoices

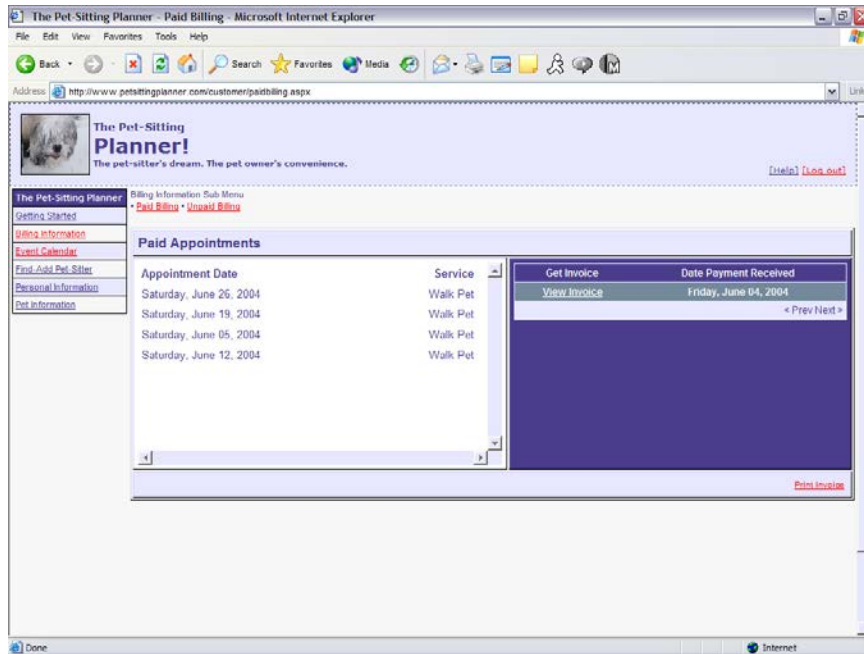


Figure 33. Customer Section – Paid Invoices

This form shows the paid appointment. On the right there is a list of dates payment was received by the business owner. To view the detail of each invoice you can click “View Invoice” hyperlink on the right side of the page or click “Print Invoice” to view or print the report in more details.

Employee Section

- Employee Information
 - View Personal Information
 - Edit Personal Information

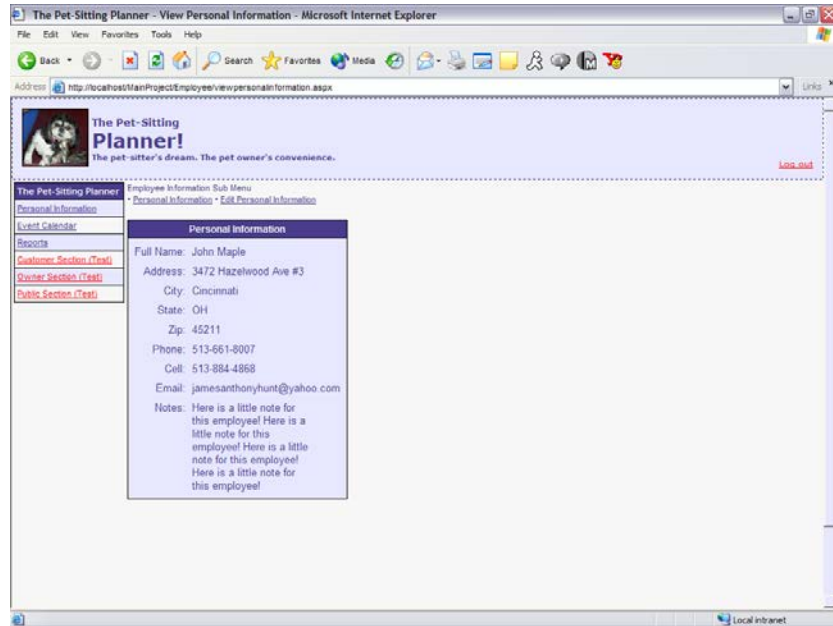


Figure 34. Employee Section – View Personal Information

This is a form that shows the employee their personal information.

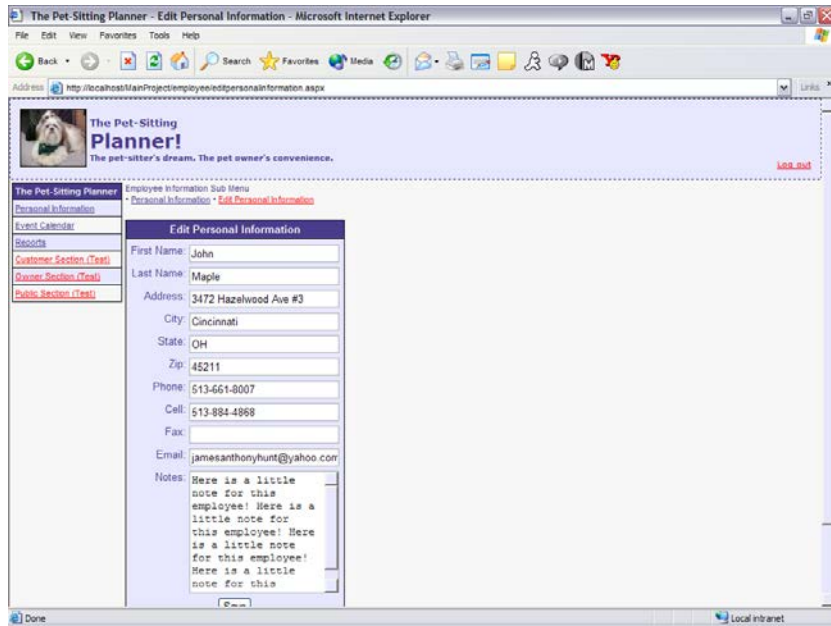


Figure 35. Employee Section – Edit Personal Information

This form allows the employee to edit their personal information. Once they have changed their information they can click save and they will be led to an un-editable view of their personal information.

- Scheduling
 - View Schedule
 - Confirmations

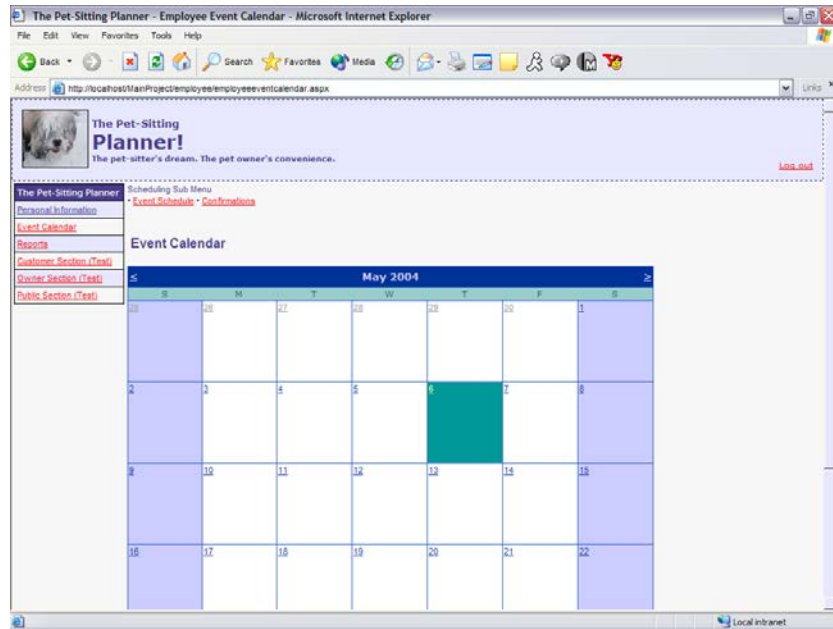


Figure 36. Employee Section – Event Calendar

This form allows the employee the ability to view their schedule. If the employee has confirmed an assigned appointment then the customer name will show in the appropriate date.

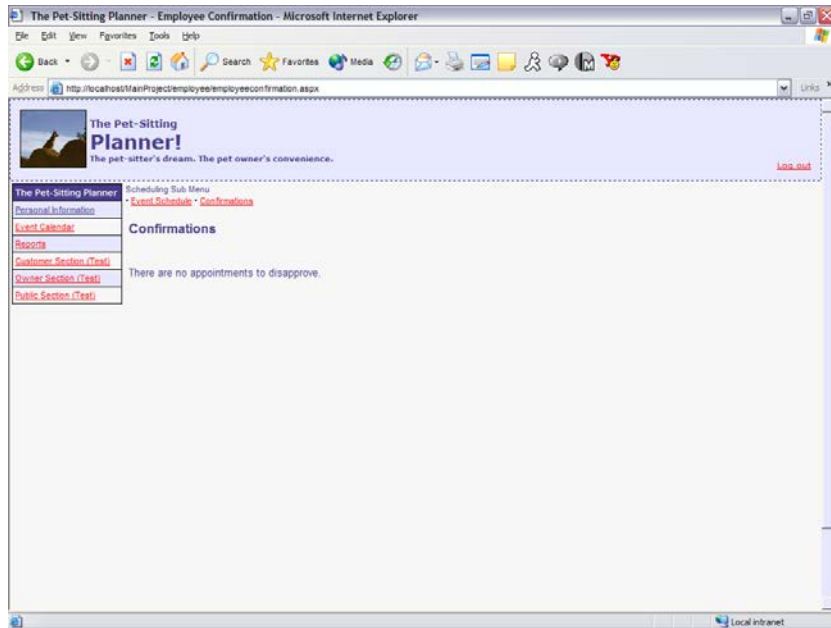


Figure 37. Employee Section – Confirmations

This form allows the employee to confirm the assigned appointments. Once they have confirmed the appointment the appointment will be visible on their calendar form.

- Reports
 - Employee Reports

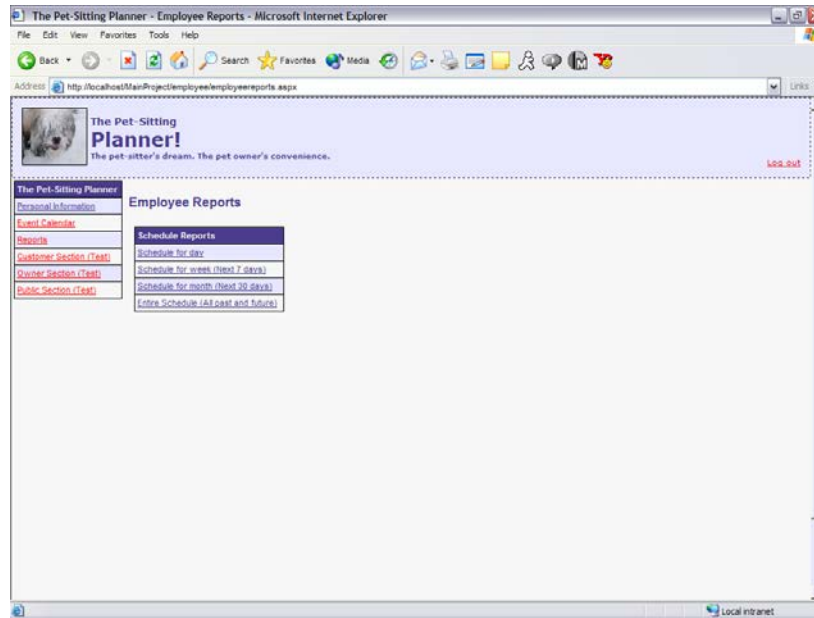


Figure 38. Employee Section – Employee Reports

This form allows the employee to print the appointments for the next day, week, month, and their entire schedule.

The screenshot shows a web browser window titled "Employee's Entire Schedule - Microsoft Internet Explorer". The address bar shows the URL: http://localhost:ManProject/employee/entireSchedule.aspx. The page content includes the title "The Pet-Sitting Planner!" and a subtitle "The pet-sitter's dream. The pet owner's convenience." with a "Print" button. Below this is the heading "Employee's Entire Schedule" and a table with the following data:

Date:	Customer Name (Address):	Service Name:	Times Per Day:
2/28/2004			
<input type="checkbox"/> 2/29/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate	3
<input type="checkbox"/> 3/1/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate	3
<input type="checkbox"/> 3/20/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate	3
<input type="checkbox"/> 3/24/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate Water Plants	2 1
<input type="checkbox"/> 3/30/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate	3
<input type="checkbox"/> 3/31/2004	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate Water Plants	3 1
<input type="checkbox"/>	Smith, Jim(123 Gardens Avenue, Tampa, OH, 33647)	Flat Rate	2

Figure 39. Employee Section – Example Report

This is an example of a report of the employee's entire schedule. The report shows the date, customer name, customer address, service, and the number of times they need to be done.

Portal Administration Section

- Statistics about the site

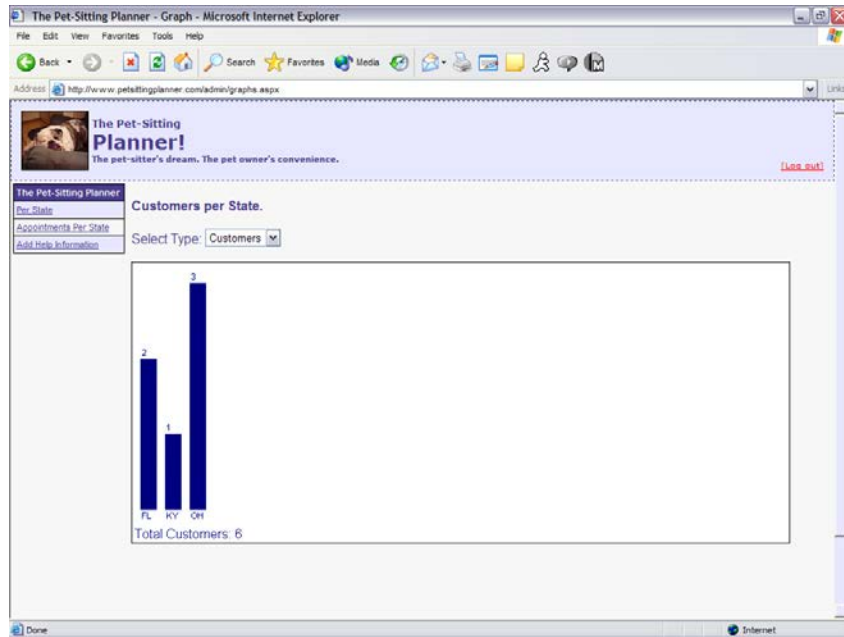


Figure 40. Administration Section – Customer Per State

This form allows the administrator to view the amount of customers per state. There are also similar screens that show the number of employees, customers, and the number of appointments in each state.

10. Testing Plan

The testing involved in this project took place through out the development process. Unit testing was done on each of the functions created by using the “step through” functionality that Visual Studio .NET provides. This testing helped to ensure the code was doing what it needed to do and reduced bugs and syntax errors.

After a tool or user control for the application was completed the developer tested it by going though the normal steps of using it. If the tool failed, the developer would attend to the tool by finding the bug and fixing it. If the tool passed the developers test then it was passed on to a *user tester*.

The user tester encompassed friends, family, and actual pet-sitting business owners. This type of testing was the most important because of the valuable feedback that occurred. If the user test failed or brought concerns to the tool then the user and the developer would communicate to solve the problem.

11. Timeline

Senior Design One

Week 1 to 5

- Research the need of the Pet-Sitting Planner Portal

Week 6 to 10

- Create the database tables and relationships
- Create the layout of the Web application

Senior Design Two

Week 1 to 5

- Continue creating the layout and look of the Web application
- Create the owners area
 - Customer Information section
 - Pet Information section
 - Services section
 - Scheduling section
 - Employees section

Week 6 to 10

- Create the unregistered customer area
 - Login section
 - Registration section
 - Find pet-sitter section
- Create the registered customer area
 - Personal Information section
 - Scheduling section
 - Find pet-sitter section

Senior Design Three

Week 1 to 5

- Create employee area
 - Employee section
 - Scheduling section
- Add reports

Week 6 to 10

- Add billing
- Add Portal Administration area

12. Conclusions and Recommendations

12.1 Conclusions

The Pet-Sitting Planner Portal was created to help pet-sitter's communicate in an organizational fashion and to help them transfer important information with their customers and employees, and visa versa. It was created with functionality and user friendliness in mind. To complete the project and the deliverables I used SQL Server 2000, and ASP.NET, C#, HTML, JavaScript, XML, and XSLT. Potential users and I did the testing of the web application to assure a great final product.

The challenges I had, during the senior design sequence, were in two areas, finding the right people to talk to about the project, such as pet-sitting business owners and patrons of pet-sitters that had time to communicate with me and secondly, learning the technology.

After time I did develop a few contacts and received enough information to develop the tools a user would need. These same contacts I had helped me in development by testing the finished product and giving me advice. This was one of the most helpful things for me. Listening to the advice of users that would concenter using the application was a high priority.

The other challenge I had to hurdle was learning the technologies. The biggest challenge was not the basic ideas behind the tools or why I would use them but how to create them. Where do I go to find the knowledge? Where do I get the references? I spent I lot of time browsing the Internet trying to find examples of ASP.NET tools, tutorials, and technology on-line forums. I think the most helpful thing was the different on-line forums. You can hold a conversation with a large group of people so that they can recommend solutions, tell you of their experiences, and point you in the right direction.

12.2 Recommendations

The application provides the owner an ability to generate invoices for payments. However, it does not allow the customer to pay online. It is recommended that an online payment be added to the project.

The application also provides the customer or owner an ability to add an appointment. However, they can only add an appointment one day at a time. It is recommended to add functionality that would allow them to set appointments for multiple dates at a time, for instance setting an appointment for Monday through Friday.

I also want to add functionality that would allow the user to adjust their look and feel of the site, similar to the blackboard.uc.edu site. Also, allow the owners to upload a logo and show this in the appropriate places on the site.

APPENDIX A

Portal Administrator Table

This table holds the personal and login information of the portal administrator.

Name	Type	Size
PortalAdminID	varchar	50
Password	varchar	25
FirstName	varchar	50
LastName	varchar	50
Address	varchar	50
City	varchar	50
State	char	2
Zip	char	5
Phone	char	12
Email	varchar	50

Owners Table

This table holds the personal and login information of the pet-sitting business owner.

Name	Type	Size
OwnerID	varchar	50
Password	varchar	25
CompanyName	varchar	50
FirstName	varchar	50
LastName	varchar	50
Address	varchar	50
City	varchar	50
State	char	2
Zip	char	5
Phone	char	12
Cell	char	12
Email	varchar	50
Fax	char	12
Website	varchar	50

Employees Table

This table holds the personal and login information of the employees associated with pet-sitting business owner.

Name	Type	Size
EmployeeID	varchar	50
Password	varchar	25
FirstName	varchar	50
LastName	varchar	50
Address	varchar	50
City	varchar	50
State	char	2
Zip	char	5
Phone	char	12
Cell	char	12
Email	varchar	50
BirthDate	datetime	8
HireDate	datetime	8
Notes	varchar	500

Customers Table

This table holds the personal and login information of the pet-sitter's customers.

Name	Type	Size
CustomerID	varchar	50
Password	varchar	25
FirstName	varchar	50
LastName	varchar	50
Address	varchar	50
City	varchar	50
State	char	2
Zip	char	5
Phone	char	12
Cell	char	12
Email	varchar	50
Notes	varchar	500

Pet Table

This table keeps all of the pets owned by each customer and their descriptions.

Name	Type	Size
CustomerID	varchar	50
PetName	varchar	25
Type	varchar	50
Breed	varchar	50
Age	char	2
Image	image	16
ImageType	varchar	50
Notes	varchar	500

Appointments Table

This table keeps appointment information for customers and employees, such as dates, notes, and confirmation status.

Name	Type	Size
AppointmentID	bigint	8
CustomerID	varchar	50
EmployeeID	varchar	50
AppointmentDate	datetime	8
Notes	varchar	500
Confirmed	bit	1

Appointment Details Table

This table holds details about each appointment such as the types of service and how many times the service are needed during that appointment.

Name	Type	Size
AppointmentDetailID	bigint	8
AppointmentID	bigint	8
ServiceID	bigint	8
TimesPerDay	int	2

Services Table

This table holds services that the pet-sitter adds to their business such as walking a pet or watering plants.

Name	Type	Size
ServiceID	bigint	8
OwnerID	varchar	50
ServiceName	varchar	50
ServiceDescription	varchar	500
ServicePrice	money	8

Payments Table

This table is to keep track of payments for business owners and portal administrator.

Name	Type	Size
PaymentID	bigint	8
OwnerID	varchar	50
CustomerID	varchar	50
PaymentDate	datetime	8
PaymentAmount	money	8
PaymentForAdmin	bit	1

Owner Employee Table

This table allows owners to have multiple employees and allows employees to have multiple owners. By using this table a many-to-many relationship has been established between the Owners and Employees tables. It also has a field that allows confirmation of the relationship between the owner and employee.

Name	Type	Size
OwnerID	varchar	50
EmployeeID	varchar	50
Confirmation	bit	1

Employee Customer Table

This table allows employees to have multiple customers and allows customers to be assigned to multiple employees. By using this table a many-to-many relationship has been established between the Employees and Customers tables. It also has a field that allows confirmation of the relationship between the employee and customer.

Name	Type	Size
EmployeeID	varchar	50
CustomerID	varchar	50
Confirmation	bit	1

States Table

This table holds state abbreviations so that the application can pull them into combo boxes dynamically.

Name	Type	Size
StateID	int	4
StateName	varchar	25

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