



FUNCTIONAL DESIGN

Stenden Edesk

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Chapter 1. Introduction

The functional design contains the explanation of the solution that was described in the project plan or assignment. This functional design contains the design for new developed system. The functional design should be easy to read and must describe precisely as possible to help the designers and programmers to develop the system. Our programmers will develop the software based on this functional design. A functional design should give the designer, the information analyst or the client a view to understanding the new software. It also guides the developers to the wanted software.

The purpose of this new system efficiency, to put everything online so that everyone can access it anytime. Clients with a maintenance license can contact employees and have tickets submitted. Stenden eHelp created and maintains a financial management software and provides a support desk for clients with a maintenance license. Stenden eHelp department and its team leader oversee the collection and resolution of all submitted tickets (incidents).

The current system is involves the team leader to log all incidents into one central excel spreadsheet, and no one else has access to it. The purpose of the new system is to address the issues with the current system. This system should streamline the system making it more time efficient and available to all employees at the same time.

This project is not connect to any other projects by Stenden eHelp or the development team. The one record of previous history is an example Spreadsheet.

Chapter 2. Description of the new system

The ticket handling web application that will be developed for Stenden Helpdesk, will consist of a electronic web-based interface to input tickets into a online database. The system works on a ranked layer system that requires users to have the right permissions (license) to access and edit content.

The permissions of the system are divided into the following divisions:

1. Clients (Stenden Helpdesk customers)

- ☐ A client/company with (or without) a user license license may view the FAQ page
- ☐ A client/company with active maintenance license may submit a ticket to the Stenden eHelp support desk.
- ☐

2. Employees

- ☐ Able to view and work on tickets
- ☐ Able to communicate with clients.
- ☐ Able to set ticket status.
- ☐

3. Administrator (Team Leader)

- ☐ Able to assign tickets to employees
- ☐ Able to treat and remove tickets.
- ☐ Unable to register incidents

The pages and functions of each page is list below:

1. Login

- ☐ Users will be prompt to login with there email and password

2. FAQ

- ☐ Shows the top solved issues.

3. Employee overview

- ☐ Accessible only by the team leader. Shows all current employees at Stenden eHelp, with the ability to add a new employee. Furthermore a employee name can be clicked to view more details.

4. Employee page

- ☐ Displays employee information and can be modified only by the team leader

5. Client information overview

- ❑ Displays previously saved information of clients with the ability to update outdated information
- ❑ Clients can view and edit the list of their registered employees with access to the client account.

6. Client ticket history

- ❑ Interface of all tickets submitted by the clients. This page displays the Ticket Name, Ticket ID, Submitted by, Date Submitted, Employee Assigned, and ticket status. From this page you can sort them by any of the above key terms, and you can click on individual tickets to get more detail about the ticket.

7. Ticket submission

- ❑ Clients with active Maintenance license can submit new tickets. They are required to enter the following: name of the ticket, employee submitting the ticket, and description of the issue. Clients without an active Maintenance license will be notified to buy the maintenance license before continuing.

8. Employee ticket overview

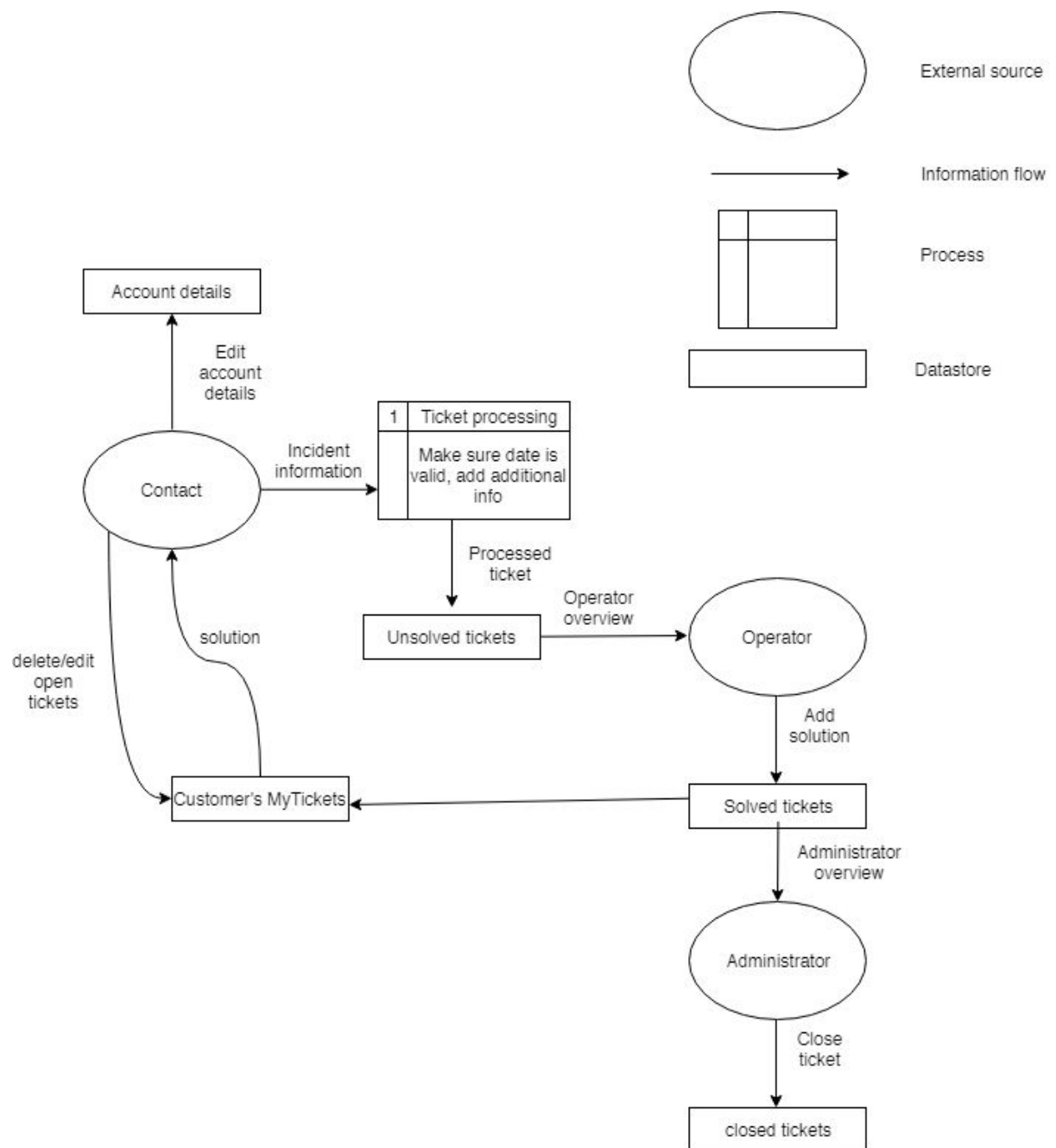
- ❑ This is the homepage after an employee has signed in. It will display all submitted tickets, as well as have a search bar, and headings of tickets where they can sort order or importance.

9. Employee ticket view

- ❑ This is the page where employees have access to tickets and can provide solutions to the ticket issues.

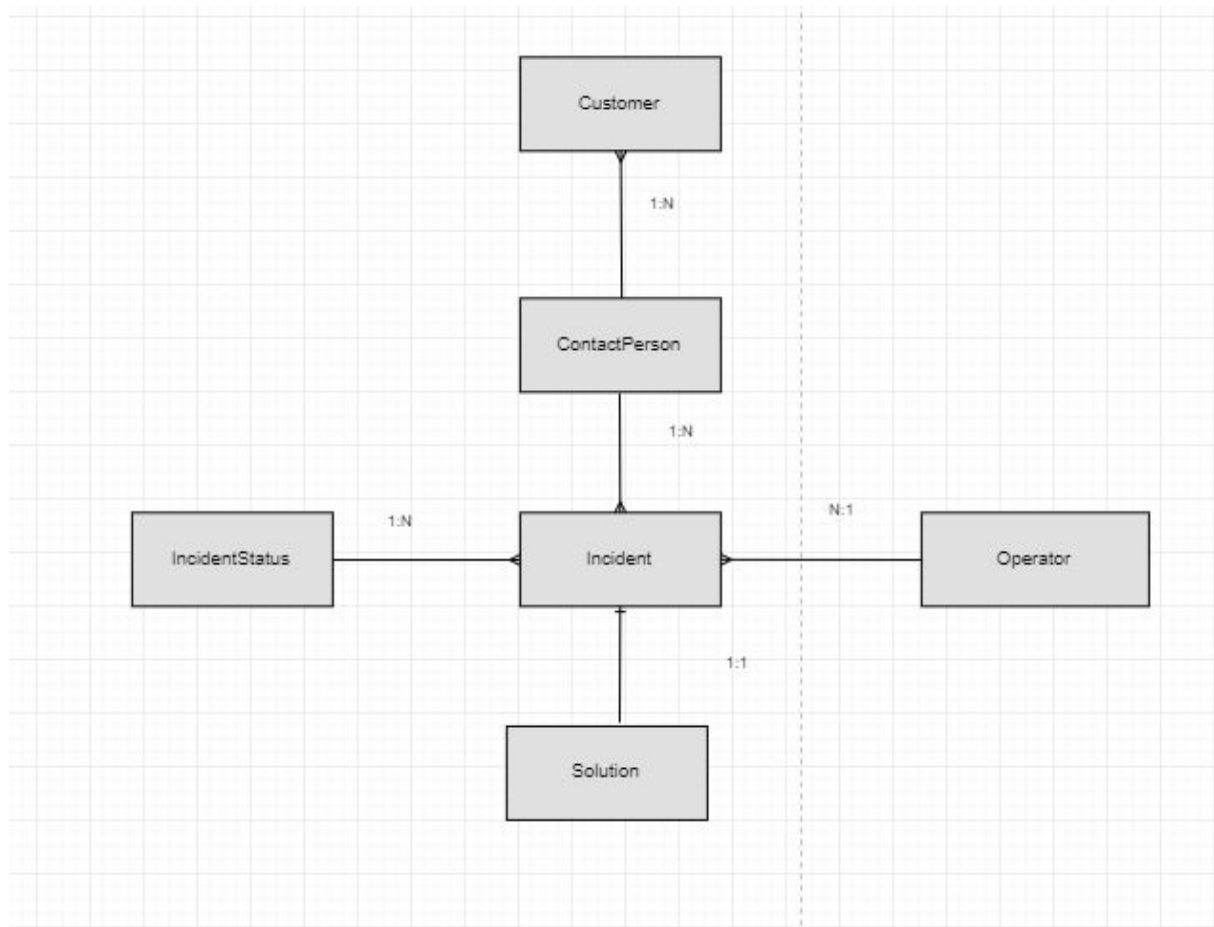
Data flow diagram

Below is a data flow diagram of the ticket system. In here all processes happening in the system are listed into a cohesive overview.



Chapter 3. Datamodel

Entity relationship diagram



Customer		
Description	Stores the information of the customer company	
Estimated records	500	
Attributes of customer	Description (plus possible requirements set)	Type
customer_id	A unique key to identify each customer	INT (4) PK
Company_name	The name of the company	VARCHAR (40)
License_id	The license id of the customer	INT (9)

ContactPerson		
Description	The details of the contact person from a specific company	
Estimated records	500	
Attributes of ContactPerson	Description (plus possible requirements set)	Type
Contact_id	A unique key to identify each contact person	INT (4) PK
Customer_id	Th foreign key for customer gotten from the customer table	INT (4) FK
First_name	The first name of the representative	VARCHAR(25)
Last_name	The last name of the representative	VARCHAR (25)
Phone	The phone number of the representative	INT (15)
Email	The email of the representative	VARCHAR (62)
Role	The role of the representative in the company	VARCHAR (30)

Incident		
Description	All the details of the log incident	
Estimated records	2500	
Attributes of incident	Description (plus possible requirements set)	Type
incident_id	A unique key to identify each incident	INT (4) PK
Status_id	The foreign key of the status_id gotten from the incident status table	INT (4) FK
Solution_id	The foreign key of the solution_id gotten from the solution table	INT (4) FK
Contact_id	The foreign key of the contact_id gotten from the contact person table	INT (4) PK
Operator_id	The foreign key of the operator id gotten from the operator table	INT (4)
Date_time	The date the incident occurred	TIMESTAMP
Description	The description of the incident	VARCHAR (254)

Incident Status		
Description	The details of the Administrator	
Estimated records	5	
Attributes of incident status	Description (plus possible requirements set)	Type
Status_Id	A unique key to identify each status	INT (2) PK
Description	The description of the incident status	VARCHAR (200)

Solution		
Description	The details of the Administrator	
Estimated records	2500	
Attributes of incident status	Description (plus possible requirements set)	Type
Status_Id	A unique key to identify each status	INT (4) PK
Description	The description of the solution	VARCHAR (254)
DATE	The date of the status incident	DATE

Operator		
Description	The details of the operator	
Estimated records	3	
Attributes of incident Operator	Description (plus possible requirements set)	Type
Operator_Id	A unique key to identify each operator	INT (4) PK
First_name	The first name of the operator	VARCHAR (25)
Last_name	The last name of the operator	VARCHAR (25)
Email	The email of the operator	VARCHAR (62)
Perm_level	the operator permission 0=operator, 1=team leader	INT (1)
Picture	path to the image of the operator	BLOB

Chapter 4. Desired Output

Code output product	PR-100
Name	Weekly incident report
User	Administrator
Aim	Give an overview of the number of incidents per week
Frequency	1x per week
Sorting	By date descending
Selection	None
Data to be printed	count of the incident ids, date at the start of the week, date at the end of the week

Information Sketch

Start week	End week	Number of incidents
29-4-2019	5-5-2019	18
6-5-2019	12-5-2019	14
13-5-2019	19-5-2019	17

Code output product	PR-101
Name	Monthly incident report
User	Administrator
Aim	Give an overview of the number of incidents per month
Frequency	1x per month
Sorting	By date descending
Selection	None
Data to be printed	count of the incident ids, month, year

Information Sketch

Month	Year	Number of incidents
January	2019	41
February	2019	32
March	2019	52

Code output product	PR-102
Name	Yearly incident report
User	Administrator
Aim	Give an overview of the number of incidents per year
Frequency	3x per year
Sorting	By date descending
Selection	None
Data to be printed	count of the incident ids, year

Information Sketch

Year	Number of incidents
2015	231
2016	301
2017	362

Code output product	PR-103
Name	Search function / Archive
User	Administrator, operators
Aim	Searching for previous incidents and give an overview of past incidents
Frequency	3x a day
Sorting	Incident date (descending)
Selection	Matching the search input
Data to be printed	incident id, incident creation date, incident closing date, resolution time, incident description, incident solution

Information Sketch

Incident id	Incident creation date	Incident closing date	Resolution time	Incident description	Incident type	Incident solution	Operator name
02314	12-4-2019	15-4-2019	3-6 days	Unable to connect	Technical	Restart connection	Cecelia Madalyn
02315	12-4-2019	30-4-2019	2-3 weeks	UI improvement	Critical	Will be considered	Racquel Redd

Code output product	PR-104
Name	Customer screen
User	Licenced_customer
Aim	Give the customer an idea of what is happening to his incident report
Frequency	3x per day
Sorting	incident_id descending
Selection	Matching with customer_id
Data to be printed	Status of incident, incident description, operator name, operator picture, incident solution, date of incident closing, date of incident opening

Information Sketch

Incident id	Incident creation date	Incident closing date	Status of incident	Incident description	Incident type	Incident solution	Operator name
02314	14-4-2019	Pending	Pending	Unable to connect	Technical	Restart connection	Cecelia Madalyn
02315	20-1-2019	5-2-2019	Resolved	UI improvement	Critical	Will be considered	Racquel Redd

Code output product	PR-105
Name	Operator incident screen
User	Administrator, operator
Aim	Give operators the ability to look into incidents
Frequency	3x per day
Sorting	By date ascending
Selection	Where the status is pending
Data to be printed	Incident id, incident description, customer id, customer name, incident date, customer number, incident type

Information Sketch

Incident id	customer name	customer id	incident date	customer number	incident description	Incident type
01322	Mikey Clematis	02312	1-5-2019	4213	Unable to connect	Technical
01331	Jerold Gretchen	14526	3-2-2019	7523	UI improvement	Critical

Chapter 5. Required Input

Code input	PR-001
Name	Customer incident report
Authorization	Customers with maintenance licence
Objective	Give customers the choice to submit new incidents
Description	<p>A form where customers can give details on their incident</p> <p><i>incident description</i>: description of the incident the customer experienced</p> <p><i>Version number</i>: Version number the customer is using of the product</p> <p><i>Type of incident</i>: The type of incident that took place (query, wish, crash, functional problem, technical problem)</p>
Frequency	5x per day
Files	incident description, version number, type of incident
Screens used	Customer incident report screen

Code input	PR-002
Name	Operator incident report
Authorization	Operators
Objective	Give operators the option submit new incidents
Description	<p>A form where operators can give details on their incident</p> <p><i>client id</i>: Id of the client</p> <p><i>incident description</i>: description of incident the customer experienced</p> <p><i>Version number</i>: Version number the customer is using of the product</p> <p><i>Type of incident</i>: The type of incident that took place (query, wish, crash, functional problem, technical problem)</p>
Frequency	5x per day
Files	client id, incident description, version number, type of incident
Screens used	Operator incident report screen

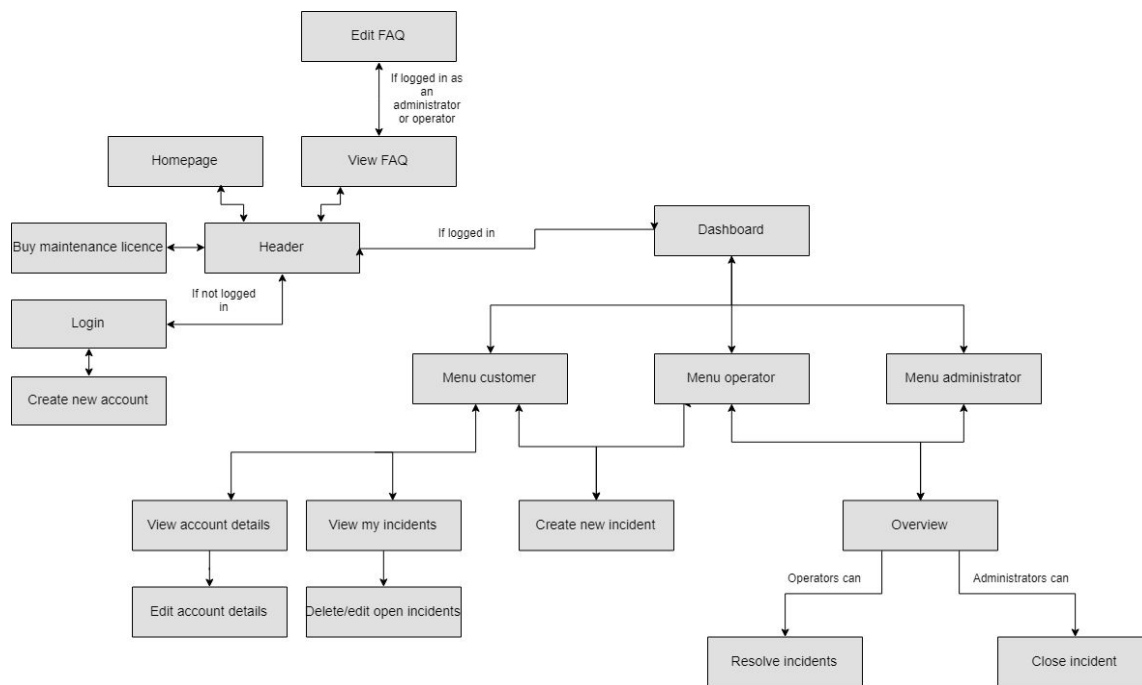
Code input	PR-003
Name	Customer registration
Authorization	New users
Objective	Give customers a chance to register their account
Description	<p>A form where customers can register their account and information</p> <p><i>company name</i></p> <p><i>customer name</i></p> <p><i>customer position</i></p> <p><i>maintenance licence id</i></p> <p><i>customer phone number</i></p> <p><i>username</i></p> <p><i>password</i></p> <p><i>customer email</i></p>
Frequency	5x per day
Files	company name, customer name, customer position, maintenance licence id, customer phone number, username, password, customer email
Screens used	Customer registration screen

Code input	PR-004
Name	Edit customer account
Authorization	Customers
Objective	Give customers a chance to edit their information
Description	<p>A form where customers can edit their account information</p> <p><i>company name</i></p> <p><i>customer name</i></p> <p><i>customer position</i></p> <p><i>maintenance licence id</i></p> <p><i>customer phone number</i></p> <p><i>customer address</i></p> <p><i>username</i></p> <p><i>password</i></p> <p><i>customer email</i></p>
Frequency	3x per day
Files	company name, customer name, customer position, maintenance licence id, customer phone number, customer address, username, password, customer email
Screens used	Customer account screen

Chapter 6. Menu structure and authorisation

Main	Submenu	Action	Admin	Operators	Clients
FAQ		Read	x	x	x
		Write	x	x	
Client Incident Overview		Read	x	x	x
		Write			x
Incidents	incident	Add New incident	x	x	x
		Update incident	x	x	
		Delete	x		
	solution	Add solution	x	x	x
	status	Update status	x	x	
		Read	x	x	x
operator	Placement	Add placement	x	x	x
Admin	Student List	Print	x	x	x

Below the menu structure of the website is listed. It notes how the users will navigate the website and what the different functionalities are.



Chapter 7. Organization consequences

During the development process and up until the completion of the project, the product will be tested by the developers.

By testing and checking the software we'll be checking if the requirements of the client are met and if everything works as it should.

As soon as the product is finalized, the employees of the company will be testing it.

To help users accept and adapt to a new system, an instruction of a product will be provided. It is going to be described how to use the system and what the user can do. When the product is finalized, the instruction will be provided to the employees and the clients.

Stenden Support Desk employees will have to attend a 2 hour tutorial in order to learn how to work in the system and read an instruction manual which will be provided after the product is done. An online instruction will be sufficient for the end-users in order to use all the possible product features.

All the future training courses or instructions will be provided by Stenden Support Desk.

Chapter 8. Technical consequences

The technical equipment needed to run the software will be a computer or laptop with a working mouse and keyboard. A stable internet connection is also a must this can be both wifi or a bandwidth connection. The requirement for the application will not be high, this will make it so it'll be able to run on older computers as well. The employees are going to be prepared with the necessary equipment, in order to manage everything smoothly and to make sure that there cannot occur any inconveniences.

A printing system will not be needed, due to the fact, there will be no need to print documents out. If a user does want to have something printed out they can use any printer. The backup of the software will be done both offline and online, so that the company will not use any data if technical problems occur. There will be a second server needed with the data available in the original one, this is for security and safety reasons so that nothing gets compromised.

The employees will be needing an email and phone number of the customers, this will be used as communication by both sides. The email address will be the main way of communication, but if the customer doesn't check their email, the customer will be called through their main phone number.