Introduction
Purpose:
My application is designed for marketing people who need to maintain a customer database with customer-specific marketing consents and take up-to-date lists of customers from the database whenever needed.

Description:
The database will be created by using PostgreSQL and the application is coded with PHP. The application will be running on users.cs.helsinki -server.
The users need to sign in before accessing the data. Thus, passwords are needed. Admin users can add, delete other users and activate or deactivate admin status for other users.

There will be three functions that are allowed for (marketing) users:

Firstly, they can browse, add, change or delete individual customers in the database.
Secondly, they can browse, add, change or delete customers' given marketing consents. (*
Thirdly, marketing people can make queries (lists) of customers according to the type of consent. If all the customers with phone consent are to be selected, the list must contain all the customers who have at least an active phone consent.

(* A marketing consent is usually a two-year agreement which gives a right to approach a customer by phone, email or mail. Some customers give all three rights for marketing purposes, the others might not give a single right whatsoever or the rights are already too old, that is, they are expired.

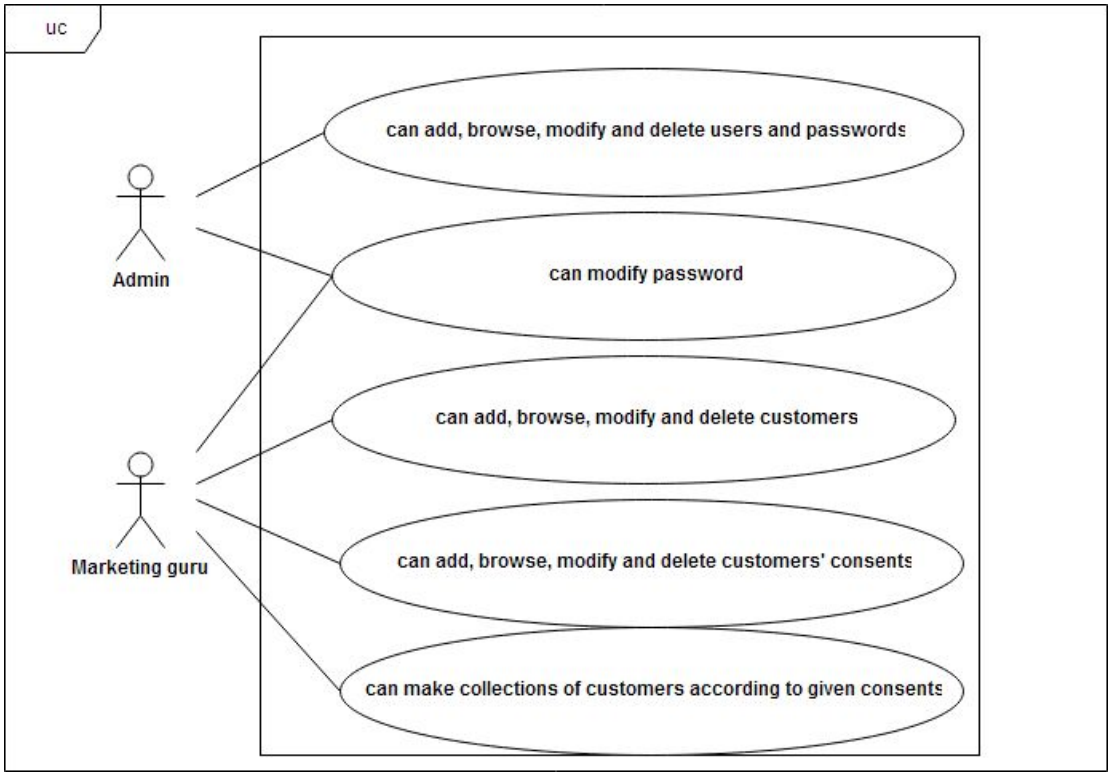
User Groups:

Admin: Administrator is responsible of giving the access to the right people.
Marketing guru: Any marketing people who have given a user account to the system.

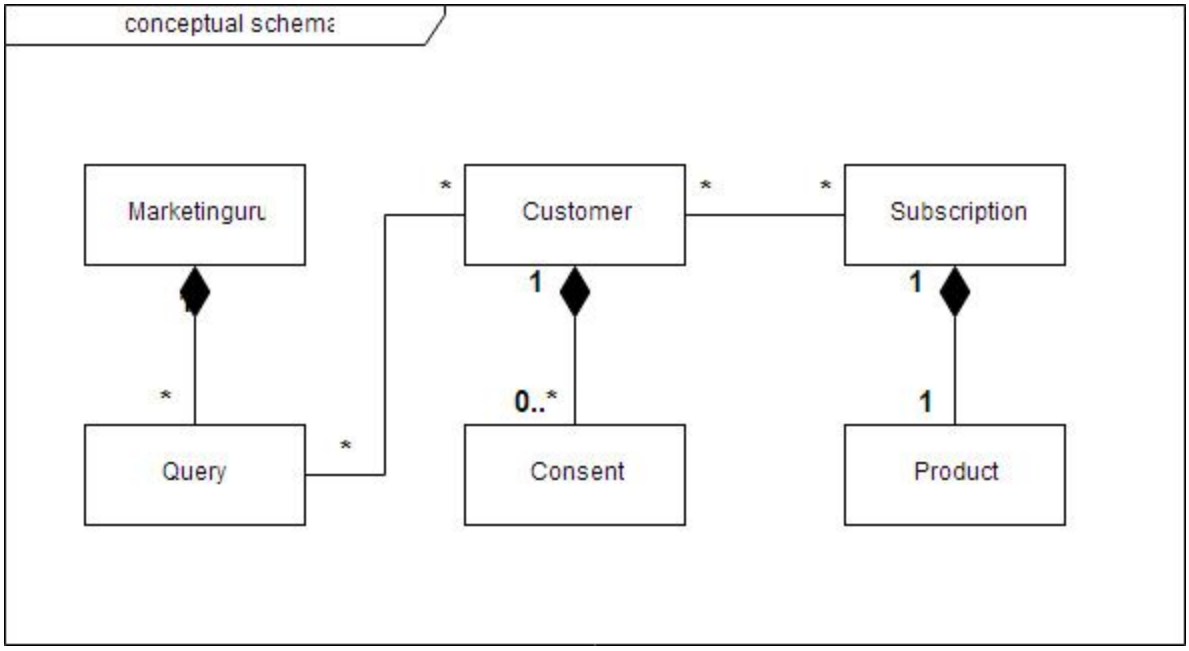
Use cases in detail:

Signing in: All users need to sign in before accessing the data
Browsing users: Only the users who have administrator rights can browse users and add new ones or delete old ones.
Modify password: All users can modify their own password. Admin only create a password when creating a new customer.
Browsing customers: Marketing gurus can browse and modify customers, add new ones and delete old ones.
Browsing customer's consents: Gurus can browse and modify consents, add new ones and delete old ones.
Collecting a list: Gurus can collect/query list(s) by choosing which consents are opted in

Use case diagram



Data Content of the System



Data item: Marketinguru

Attribute	Value	Description
Name	VARCHAR(60)	The name of Marketing user
Email	VARCHAR(40)	The email address which is used for accessing the system
Admin_rights	BOOLEAN	If Admin rights, then TRUE, otherwise FALSE.
Password	VARCHAR(50)	

There can be finite numbers of marketing gurus who have made zero to many queries from the data. Email is used as a username.

Data item: Query

Attribute	Value	Description
name	VARCHAR(60)	The name of the query
created	TIMESTAMP	
email_consent	BOOLEAN	

address_consent	BOOLEAN	
number_consent	BOOLEAN	
sms_consent	BOOLEAN	
thirdparty_consent	BOOLEAN	
sum_rows	INTEGER	The number of rows of the query after it has been generated

There can be finite numbers of queries made by single marketing guru. Each query collects data from customers. In order to perform a query of a certain consent type(s) the result gives at least those customer rows which have at least the searched consent(s).
Data item: Customer

Attribute	Value	Description
name	VARCHAR(60) NOT NULL	The name is the only required field in order to create a new record.
email	VARCHAR(40)	
address	VARCHAR(120)	
number	VARCHAR(20)	
email_consent	BOOLEAN	
address_consent	BOOLEAN	
number_consent	BOOLEAN	
sms_consent	BOOLEAN	
thirdparty_consent	BOOLEAN	
created	TIMESTAMP	The time the customer was created to the system.
modified	TIMESTAMP	The time the most recent modification took place.
modifier	INTEGER	The user who has most recently modified the customer record.

Only the name of the customer is required, all other fields can be optional. TImestamp is generated as the customer is created. Each customer can have no, one or many consents. If the customer data is modified, the user and the time is recorded to the table as well.

Data item: QueryCustomer

Attribute	Value	Description
query	INTEGER	The query number to which a row is the member of.
customer	INTEGER	The customer number which is a part of the query result.

QueryCustomer records the individual customer rows which are a part of the specific query. Each query is time-dependent which implies that the result set differs in time because the active customers might turn out to be passive on a later date and the individual consents might change over time.

Data item: Subscription

startdate	VARCHAR(40)	The time when a subscription started.
enddate	VARCHAR(40)	The time when a subscription will end or ended. This field is NULL as long as subscription is not cancelled.
created	VARCHAR(40)	The time when the subscription was recorded to the system.
cancelled	VARCHAR(40)	The time when the cancellation was recorded to the system. The date might differ from the enddate because the cancellation occurs before the subscription ends.
customer	INTEGER	A customer id number
product	INTEGER	A product id number to which the subscription is related.

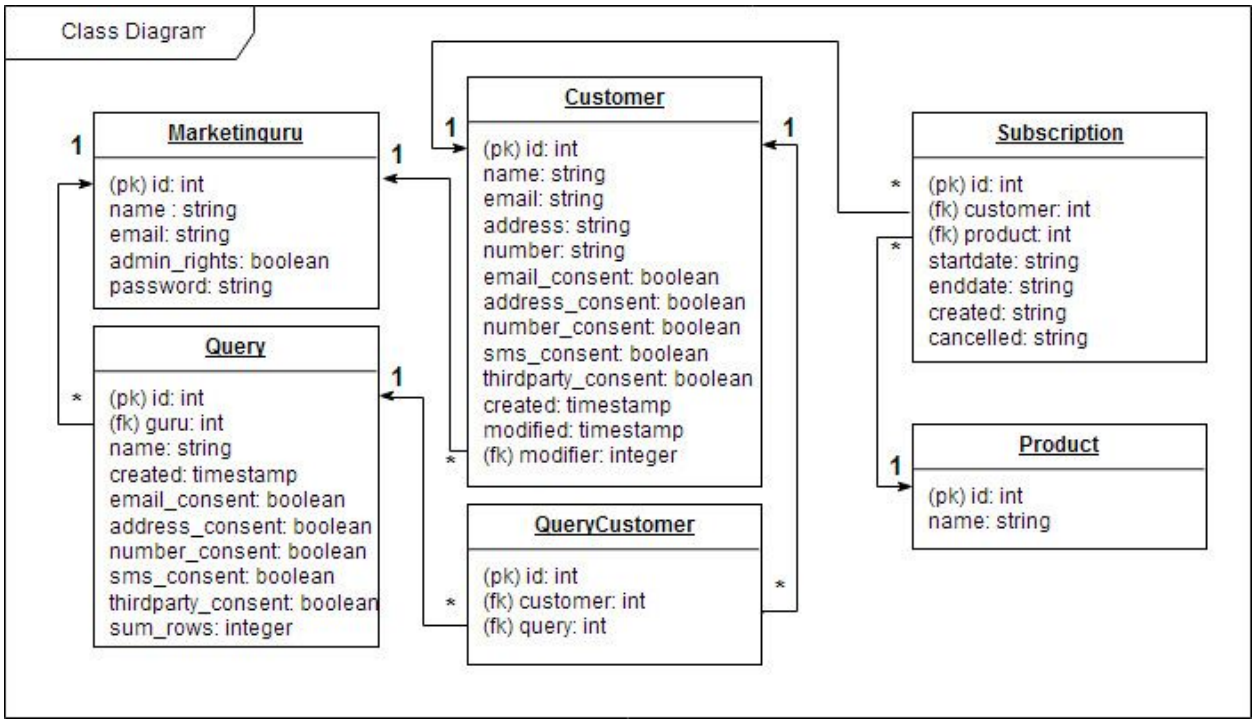
Each subscription is related to a product and a customer. A customer can have many subscriptions which each relate to a single product. There might be the case that a customer has many subscriptions of the same product in different time periods. A customer can have several subscriptions that are currently active, but usually there are no multiple same product subscriptions that are active at the same time.

Data item: Product

name	VARCHAR(50) NOT NULL	The name of the product

Product relates to subscriptions as the product specifies a subscription.

Database Diagram



User manual & How to use the system

Customer Database can be accessed only by registered users. There are two types of users: administrator and normal users. The difference is that administrator users can access the Users section where new user accounts can be created and activate or deactivate administrator rights for individual users. Currently, passwords are not encrypted.

All users can browse the Customers section where new customers can be created and the existing ones modified. When a customer is created the only requirement is to give a name to the customer. All other information and the checkbox for marketing consent are optional.
There are validations for email and phone number formats.

Customer information can be modified by everyone. Both the time when customer was created and last modification took place are recorded with timestamps. The user who modified the records most recently is recorded as well.

Users can create queries by choosing a name and selecting the consent or consents which are at least required for the marketing purposes. The query result of today may differ the result set of tomorrow, since new customers might be created to the system and the consents might be updated.

Structure of the system

The system is made by following the architectural pattern of model-view-controller (MVC).
Controllers, views and models of the system are in the folders of controllers, views and models, respectively.
The support libraries are in the lib folder and the settings in the settings.php.

There are three controllers and models: a query, marketinguru and customers controller/model.
Each one is dedicated to the functions of each class.
The functions are:
1) showing the list of existing records in each class,
2) creating a new record,
3) modifying an existing one,
4) deleting the individual record.

Both marketing gurus and customers can be deleted, but not any queries after those have been created. Queries cannot be modified either afterwards.

The session information is saved and used in login procedures.

User interface and the components of the system