**Introductory statement**

Our client is the University of Hamburg – more specifically, their entomology department.

Due to the university’s agreement with the German government, in order to receive funds in support, the university’s material must be publicly accessible. For that purpose, we must design a search engine and corresponding database, which will be accessible from their website. This will allow people to access the information stored by searching for it and subsequently allow the administrators to add new entries.

**Problem statement**

Part one of the project in simple terms is that we have to create a database containing entries that represent insects. An insect in this instance will contain four attributes by which it is characterised: Its name, family, species and genus. Furthermore, each entry must also contain a link to a [www.zoomify.com](http://www.zoomify.com) image of the insect. The usage of zoomify is at the request of the university. This is because it allows high-resolution images in which the users can zoom, but also because it prevents a user from simply downloading the image and copying the database.

Part two is then creating a search engine affiliated with the database we established. The search engine must allow the user to search for the name of any of the four attributes of an insect in the database. Once the search is finished, the engine must then display all entries that contain an attribute fitting the search-criteria.

Part three - the final part – is developing a method, which will allow the employees in the entomology department to both input their own entries into the database we developed and also remove existing entries. This functionality must also be restricted for anybody but the authorised employees, to ensure that the database is only editable by the desired people.

For the purpose of organising, the functional requirements of the program are:

* The program must return any and every entry that contains an attribute that matches the search input
* The database must allow the creation of new entries, editing of existing entries and deletion of existing entries
* The database must be unable to be edited by anyone save the authorised employees

The non-functional requirements are:

* The search engine must be developed in PHP so it can run on their website in a standard browser with no additional requirements (plugins etc.)
* The method of editing the database must be simple enough for people without pre-existing IT skills to use it.

**Software management plan**

The database part of the program, responsible for holding all the data for our client, is to be developed in Oracle SQL using Oracle SQL developer.

Proceeding that, the database will communicate with a front-end website containing the search engine, which is to be created using a combination of HTML and CSS for the layout of the website and PHP for the search engine itself.

After that, the method which will allow the authorised employees to edit the database. This will be designed according to the client’s specific wishes with their convenience in mind, and will be developed as either a Java-program if they wish to keep it separate from the website or in PHP if they wish it integrated.

Naturally we’ll cooperate internally in the group, but for the purpose of ensuring utmost quality-control in all aspects of the development, each necessary part of the process has been given a person of responsibility that will ensure that each respective part functions exactly as desired by the client and intended by us.

* **Yunus Emre Okutan** – responsible for developing the front-end for the search engine in HTML/CSS/PHP
* **Enes Golic** – responsible for developing the database
* **Tor-Salve Dalsgaard** – responsible for ongoing contact with the client and overall managing of the project
* **Casper Lützhøft Christensen** – responsible for development of the separate application to allow only authorised employees access to database