

## Project Part 2 – Group C – andpl509 & danhu849

### Question 8

A) How can you protect the credit card information in the database from hackers?

- By making sure to be PCI-compliant and only store information absolutely necessary. That information should in turn be encrypted or hashed, preferably with a salt before being stored in the database.
- Encryption should occur on both the client and server side to decrease the risk of critical information being intercepted although this is more of a networking question.

B) Give three advantages of using stored procedures in the database (and thereby execute them on the server) instead of writing the same functions in the front-end of the system (in for example java-script on a webpage).

1. Security is increased since direct access to the tables is not given. The procedures act as a middle layer limiting what a potential adversary can do when given unauthorized access to the system. Furthermore, the underlying code for the procedures can be encrypted further limiting attack surface.
2. It is faster to execute the procedures server side since servers usually have more resources than client hardware.
3. Easier to modify stored procedures than front-end functions since changing front-end functions might need the front-end to be temporarily taken down for maintenance and then redeployed.