



INFORMATION ENGINEERING

PART 1

By student:
Vladislav V. Tsvetanov
Student number:
1909875
Course title:
Informational Engineering
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Module Lecturer:
Dr Anupam Mazumdar

Acknowledgements:

I would like to show my gratitude to Dr Anupam Mazumdar and all the staff of the UWTSD for bringing the study of Software Development and making the Cloud Computing program closer to the real-life experience. We can see that the purpose of this coursework is to help students to show their understanding, problem solving and developing skills

Objectives:

The aim of this course is to give understudies the skills to translate theoretical skill into reality. To give the students the fundamental of computer-based systems analysis and design. Planed ideas how to navigate throughout the debris of data base.

Finding:

Upon the effective finishing of this module, the understudy ought to have the option to show the capacity to produce systems specifications. To utilize them accordingly in the development of a database designing. Will have the ability to find solutions including problem solving in order to create unique application. Therefore, correct system evaluation and methods to identify and interpret customer needs into specific application.

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1. First resolution

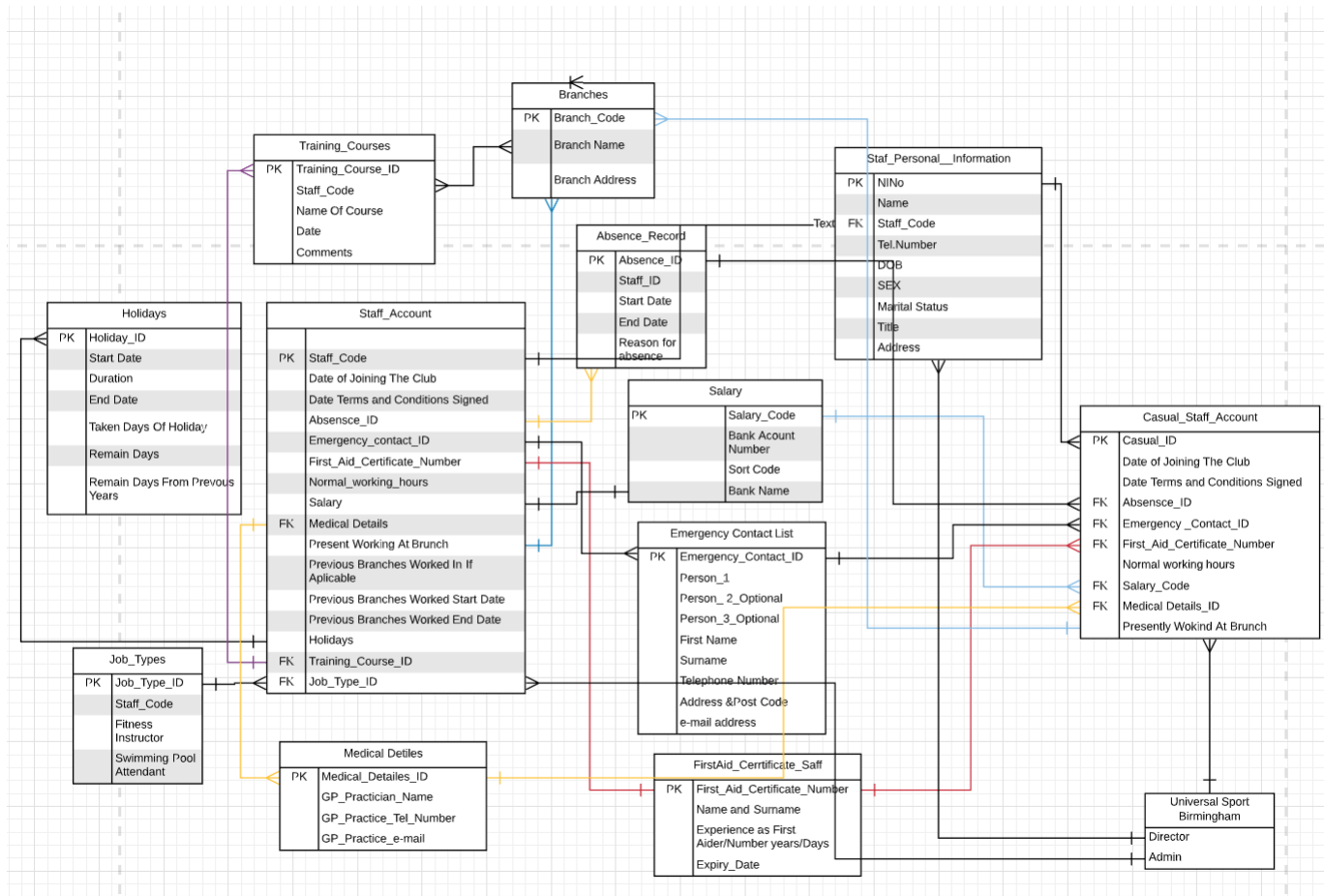


Figure 1. ERDiagram

That's the first diagram made on lucid chart-Figure 1. All the information required is include as well as foreign keys and primary keys. The director along with the one of admis has Access to the Staff_Personal_Information. The relationship here is one to many. Moreover, the director and one person from admin company has access to all other information. The relationship is one to many as one person have access to many information.

Next table is **Casual_Staff_Account**. Here The relationship Between Other tables like: First_Aid_Certificate_Staff; Medical_Details; Staff_Personal_Information; Emergency_Contact_list; Salary; Asence_Record; Branchess. All those relationships are Many to One because One person from the staff can have only one Salary account, only one First Aid Certificate, Emergency, Absence, Branch Code or ID. This table have Casual_ID as Primary Key. And Another5 foreign Key that are used as a links to tables. This can be seen on Figure 1.

And again **Staff_Account** table where we can see the very same relationships as in casual. But a few more relationships on the basis many to one. This are entities and their properties of job Types and Training courses and Holidays. This has been done so because only staff can access to holidays and courses. Moreover, there are job types for both of them because the other job type is casual staff. Latter has separate table and need no access for this table.

Staff_Personal_Information having a strong one to Many Relationship with Staff account and Casual_Staff_Account because lots people from both of this tables can have only one personal information Account. This table has two FK which are the connections with both of the tables and one PK NINo .

First_Aid_Certificate table is with PK the number of the certificate because as well as NINo, this is an unique number. Moreover, with this number you can enter the nationwide basis of certificates. Track the validation, expiry date and records too.

It is a lot more in this table, but I decided to abandon and make simpler one. The one I am going to use is the one below. Figure 2 []

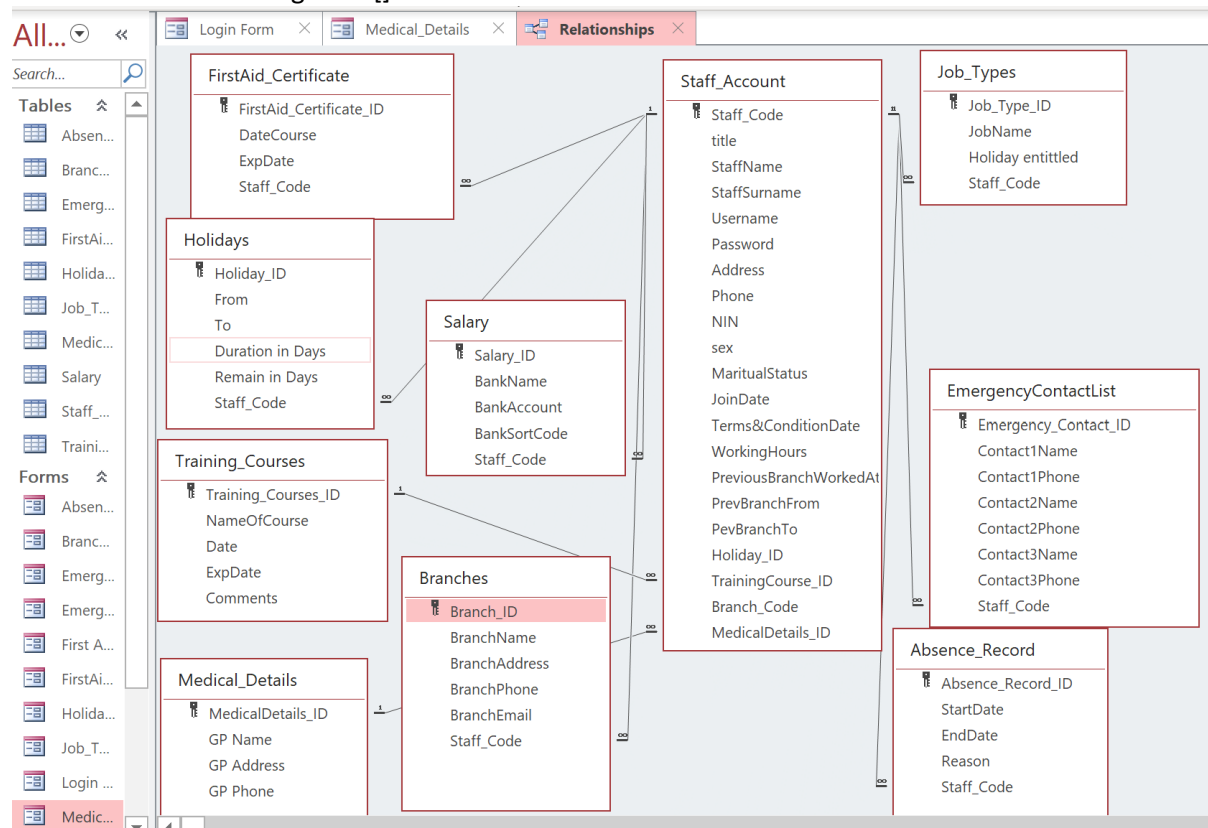


Figure 2. SIMPLER ERD

2. My Choice

Contrary with the first table in “SIMPLER ERD” the unique Staff_Code has been used as FK in most of the tables. But in the staff_account is a PK. In this table contrary to the previous Figure 1. All the staff, including casual has their information there. Casual still don’t have access to holidays and training courses. The relationship between this table and two of the tables is many to one. This tables are: Medical_Details and Training_Courses. Accordingly connected with FOREIGN KEYS to their PRIMARY KEYS in the two forms. All other tables are connected with PK Staff_Code and the same property as FK in the remain tables. It’s a easier and simpler resolution to the problem. So I would chose the second one.