CRC Cards

The CRC (Class-Responsibility-Collaboration-Card) is a tool for object-oriented design. The basic principle is to create a file card for each class and note its properties.

Structure

Class

- Which things are parts of the system?
- Which things communicate or interact with the system?
- Are there specific customers or users of the system?

Responsibilities

- What is this class doing? (Functions)
- Which information is known to this class? (Attributes)

Collaborators

- Does this class need information from another class?
- Does this class change information from another class?
- Is there a collaboration with another class?

People

natPerson

natPerson (abstract) is the basis for natural persons.	
Responsibilities	Collaborators
- knows the name and address of the person - knows date of birth, sex and AHV number. - can represent himself **Functions:** **Attributes:** - Name - Firstname - Address - Postcode - City - Birthday - Gender - AHV	

Employee

Employee (abstract)	
forms the basis for employees. The employee class also contains the login information, since all employees should have a login to the application.	
Responsibilities	Collaborators
- is a natPerson - knows his salary and department - knows his insurance numbers - knows when the employment starts and ends - knows his login / profile data - interact with the application - can be hired - can change the insurance - can be cancelled - can log in Functions: Attributes: - Salary - Departement - BUV - NBUV - EmploymentStartDate - EmploymentEndDate - Nickname - Password	Extend natPerson

Doctor

Doctor	
a doctor is the main role of our application	
Responsibilities	Collaborators
- is an Employee - knows his necessary admission numbers - knows his speciality - can mutate his numbers - can change his speciality Functions: Attributes: - MEBEKO Nr - BAB Nr - ZSR Nr. - Specialty	Extend Employee - can generate reports - can delegate MPA - can manage a case

Nurse

MPA is the direct assistant to the doctor. MPA work as nurses	
Responsibilities	Collaborators
● is an Employee ● knows his necessary admission numbers ● can mutate his number Functions: Attributes: ● MEBEKO Nr	Extend Emplyoee ● can insert data for reports ● manages patients ● carries out instructions from the doctor

Patient

Patient (abstract) is the basis for a patient in our system	
Responsibilities	Collaborators
- is a natPerson - knows his unique ID number Functions: Attributes: - PatId	Extend natPerson

Report data

Report

Report (abstract class)	
Is the basis for the Patient-, Case-, Business- and StandupReport.	
Responsibilities	Collaborators
<table><tr><td> - knows his content - knows his purpose / description - knows his creation date - knows who issued the report </td></tr><tr><td>Functions:</td></tr><tr><td></td></tr><tr><td>Attributes: - Title - Description - IssueDate - IssuedBy </td></tr></table>	is created by Employees

PatientReport

PatientReport tbd	
Responsibilities	**Collaborators**
• Functions: Attributes: • 	

CaseReport

CaseReport	
is the basis for a case report and evaluation	
Responsibilities	Collaborators
knows its case 	● uses a case to extract data

Within the Responsibilities cell:

Functions:

Attributes:
● CaseID

BusinessReport

BusinessReport	
is basis for stakeholders	
Responsibilities	Collaborators
• Functions: Attributes: •	

StandupReport

StandupReport	
tbd	
Responsibilities	Collaborators
•	
Functions:	
Attributes:	
•	

Case Informations

Case

Case	
A case describes one finite consultation between a doctor and a patient	
Responsibilities	Collaborators
- knows the time it starts and ends - knows where it's located - knows its insurance **Functions:** **Attributes:** - CreationDate - EndDate - Place - Insurance - InsuranceName	- Belongs to exactly 1 Patient - Belongs to exactly 1 CaseReport - Can contain 0 or multiple Appointment, Prescription, LabResults. - Has at least 1 or multiple Diagnosis - Has exactly 1 Anamnesis

Diagnosis

Diagnosis	
Describes a diagnosis in a Case	
Responsibilities	Collaborators

Functions:
  ●
Attributes:
  ●
	- is part of exactly 1 case

Appointment

Appointment	
is needed for managing appointments in the calendar and belongs to a case	
Responsibilities	Collaborators
- knows time, date, place - knows his attendees - can be repetitive - can mutate time, date, place Functions: Attributes: - Time - Date - Place - Patient - Employee (IssuedBy)	- is part of a case - is created by Employee - is using Patient

Anamnesis

Anamnesis	
Responsibilities	**Collaborators**
<table><tr><td>**Functions:** - Getter and Setter for all Attributes - Getter for all Case-Attributes(?). **Attributes:** - SocialAnamnesis - Employment, Relationships, Home - PersonalAnamnesis - Allergies, Drugs, Addiction, Diet, Hobbies, History of Illness - SystemAnamnesis - FamilialAnamnesis </td></tr></table>	- Belongs to exactly 1 Case. - Each Case has exactly 1 Anamnesis.

Prescription

Prescription	
Describes a prescription for drugs and or medicaments	
Responsibilities	Collaborators
Functions: ● Getter and setter for alle Attributes ● Getter for all Drug-Attributes. ● Getter for Case-Attributes(?). **Attributes:** ● Quantity ● Times of Administering(?)	- Belongs to exactly 1 case - Includes 0(?) or multiple drugs

Drugs

Drugs	
Describes a drug used in a description	
Responsibilities	**Collaborators**

Functions:
  ● Getter and Setter for all Attributes
  ● Getter for all Prescription-Attributes(?).
Attributes:
  ● Name
  ● Dosis / Weight
  ● Administering
  ● Warnings / Caves
  ● Price
	- Belongs to exactly 1 Prescription.

LabResults

LabResults	
Describes the Result of a Lab-related Analysis, e.g. blood or urine	
Responsibilities	Collaborators

Functions:
   ● Getter and Setter for all Attributes.
   ● Getter for all Lab-Attributes(?).
Attributes:
   ● BloodAnalysis
   ● Hemoglobin, Hematocrit, Cells
   ● ChemicalAnalysis
   ● Sugar, Proteines, Vitamines
   ● MicrobiologicalAnalysis
   ● Bacteria, Virus, Parasites
   ● HIV
   ● Hepatitis-C
   ● UrineAnalysis
   ● Glucose
	- Belongs to exactly 1 Case.
	- Belongs to exactly 1 Lab.

Lab

Lab	
Describes an external Lab and its location	
Responsibilities	**Collaborators**
 	Functions:
● Getter and Setter for all Attributes.
● Knows its LabResults (nötig?)
Attributes:
● Name
● Address
● Postcode
● City
● Other(?)		- Can have 0 to multiple LabResults

Other

Message

Message	
is the basis for a internal message	
Responsibilities	Collaborators
- knows its content - knows when it's sent Functions: Attributes: - MessageId - Content - sentDate	- is created by Employees