TECHNISCHE UNIVERSITÄT WIEN

Workflow Modeling and Process Management VU 188.924

Jürgen Dorn & Malinda Perera (Tutor)

“Emergency Transport Hospital”

First Assignment

Group 14

Project Tasks

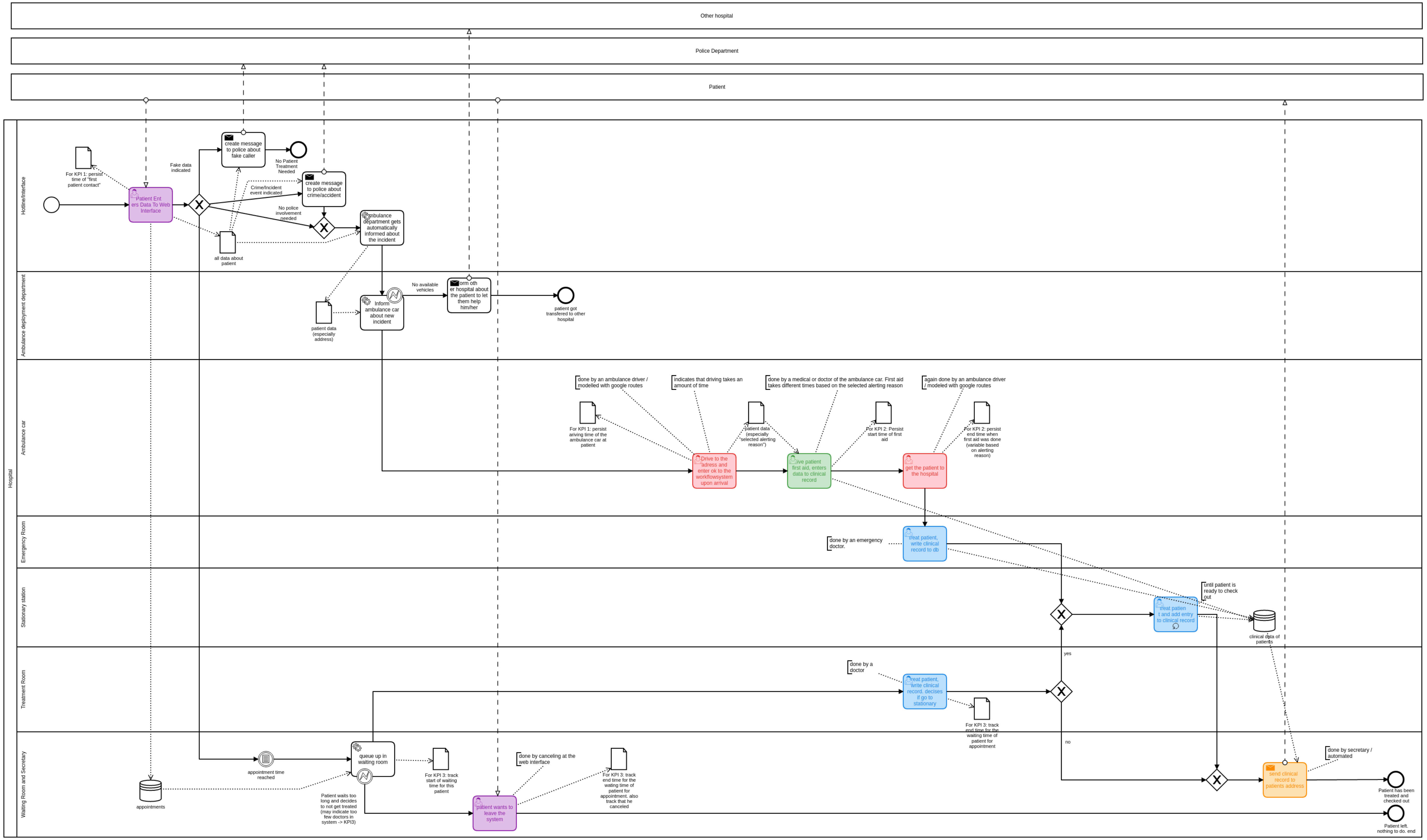
Mustafa Jandal	1607444	Hotline
Philipp Komar	1227119	Ambulance Deployment
Michael Pazourek	1225721	Send Ambulance
Daniel Ramsauer	1226696	Stationary & Emergency (Room) Treatment
Anton Stütz	1129424	Doctors Appointment & Treatment Room & Secretary

Selection of Business Process Management System
The software that will be used to develop the system is the open source BPM **activiti** framework**,** implemented in Java.

Description of the Diagram

Most of the things should be clear by looking at the BPMN. But one thing we did different is the color indication for the different users that we have modeled with user tasks. Also we modeled KPIs as we thought it is good. But after your last lecture Mr. Dorn told us that a short explanation might give a better idea what we meant because there is no real best practice for modeling KPIs:

- Colors of the user tasks: We have several user tasks that will be done by different users (roles). There are tasks that are done by the patient (violet), tasks done by the ambulance driver (red), tasks done by the medical assistant in the ambulance car (red), tasks done by the doctors in the hospital (blue), and one user task that is done by the secretary (that we will automate in our case) for sending the clinical record.
- We modeled our three KPIs with data artifacts of BPMN. They are indicating the timestamps of the start and the end.
  - KPI 1: Measures the time between the first user contact and the arival of the ambulance car.
  - KPI 2: Measures the time needed for first aid treatment. This is influenced by the user input at the start of our process.
  - KPI 3: Measures the waiting time for the appointments. KPI 3 does also measure how many patients are leaving the queue due to no available doctors of other reasons.


Other hospital
Police Department
Patient
Hospital
Hotline/Interface
Ambulance deployment department
Ambulance car
Emergency Room
Stationary station
Treatment Room
Waiting Room and Secretary
For KPI 1: persist time of "first patient contact"
Patient Enters Data To Web Interface
Fake data indicated
create message to police about fake caller
No Patient Treatment Needed
Crime/Incident event indicated
create message to police about crime/accident
No police involvement needed
all data about patient
Ambulance department gets automatically informed about the incident
patient data (especially address)
Inform ambulance car about new incident
No available vehicles
Inform other hospital about the patient to let them help him/her
patient got transfered to other hospital
done by an ambulance driver / modelled with google routes
indicates that driving takes an amount of time
done by a medical or doctor of the ambulance car. First aid takes different times based on the selected alerting reason
again done by an ambulance driver / modeled with google routes
For KPI 1: persist ariving time of the ambulance car at patient
patient data (especially "selected alerting reason")
For KPI 2: Persist start time of first aid
For KPI 2: persist end time when first aid was done (variable based on alerting reason)
Drive to the adress and enter ok to the workflowsystem upon arrival
Give patient first aid, enters data to clinical record
get the patient to the hospital
done by an emergency doctor.
treat patient, write clinical record to db
until patient is ready to check out
treat patient and add entry to clinical record
clinical data of patients
yes
done by a doctor
treat patient, write clinical record. decises if go to stationary
For KPI 3: track end time for the waiting time of patient for appointment
no
appointments
appointment time reached
queue up in waiting room
Patient waits too long and decides to not get treated (may indicate too few doctors in system -> KPI3)
For KPI 3: track start of waiting time for this patient
done by canceling at the web interface
patient wants to leave the system
For KPI 3: track end time for the wating time of patient for appointment. also track that he canceled
done by secretary / automated
send clinical record to patients address
Patient has been treated and checked out
Patient left. nothing to do. end