Homework 2 – System Modeling

Team 9
Kai Wang, wang8739
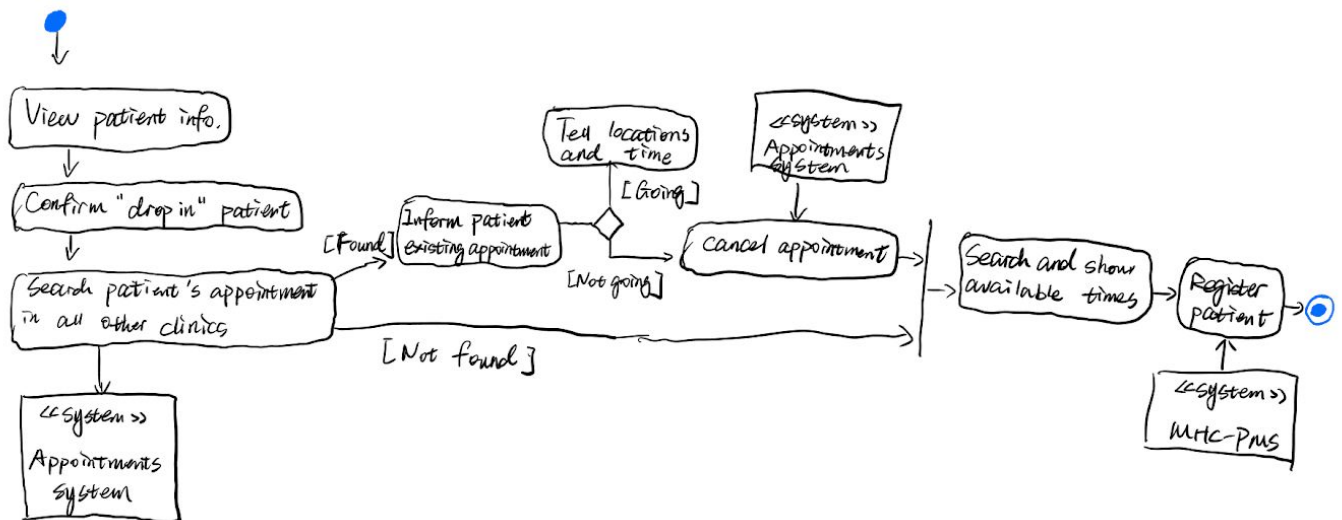Jingfan Guo, guo00109
Ruoyan Kong, kong0135
Yuan Yao, yaoxx340

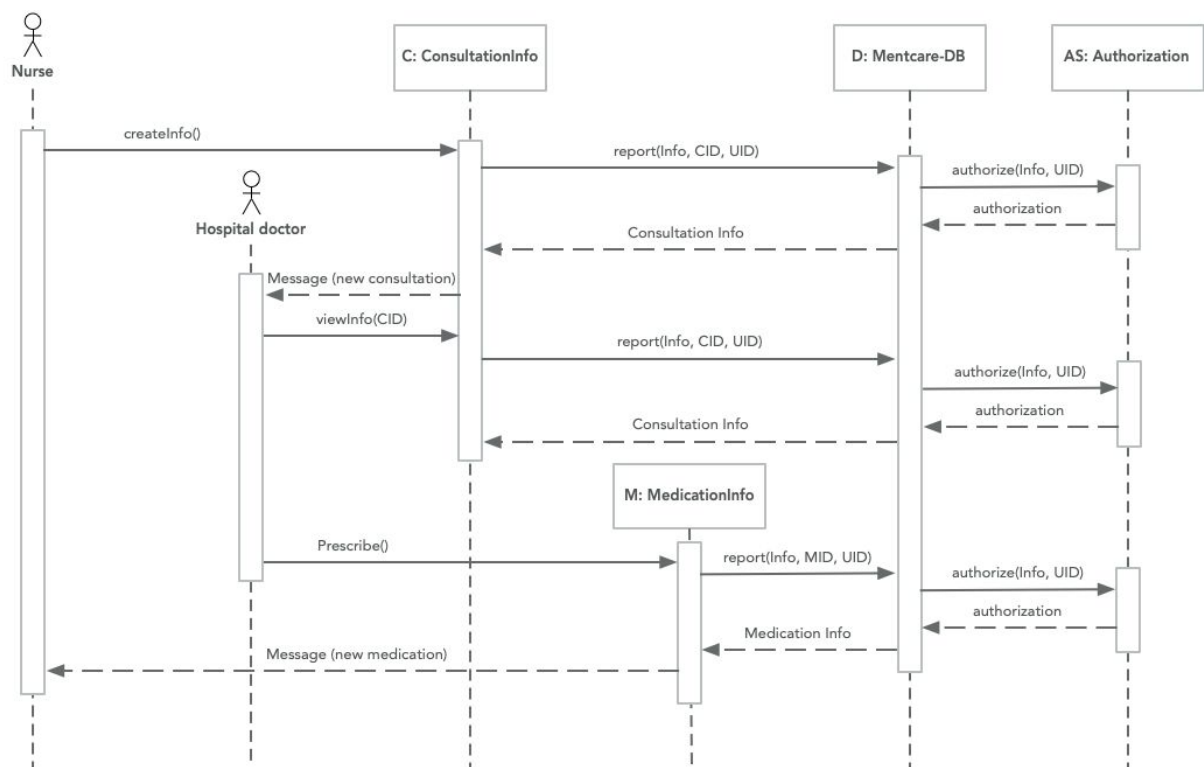## Problem 1 (20 points – 10 each): UML Activity Diagram:

Yuan Yao
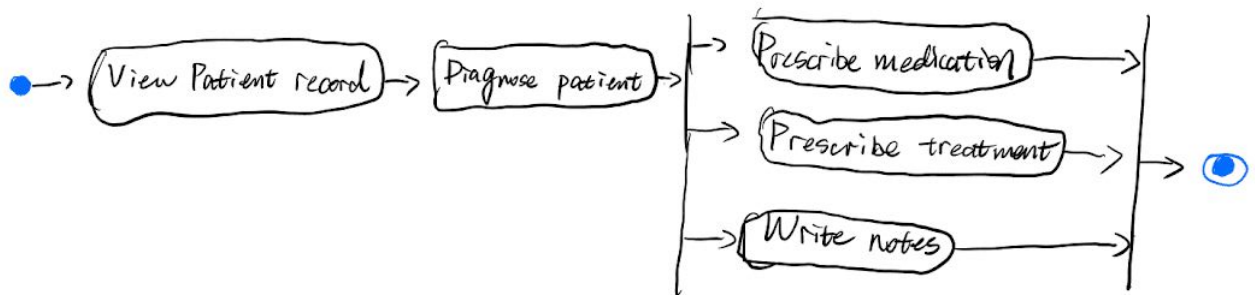
Problem 2 (10 points): Sequence Diagram: Jingfan Guo

Problem 3 (10 points): Use Case Diagram: Ruoyan Kong

Doctor

- Create patient records
- Edit patient information
- View patient history
- Search appointment list
- Add prescriptions/ treatment
- Contact patient
- Warning of non-visit patient
- Warning of danger/ suicide
- Track sectioned patient
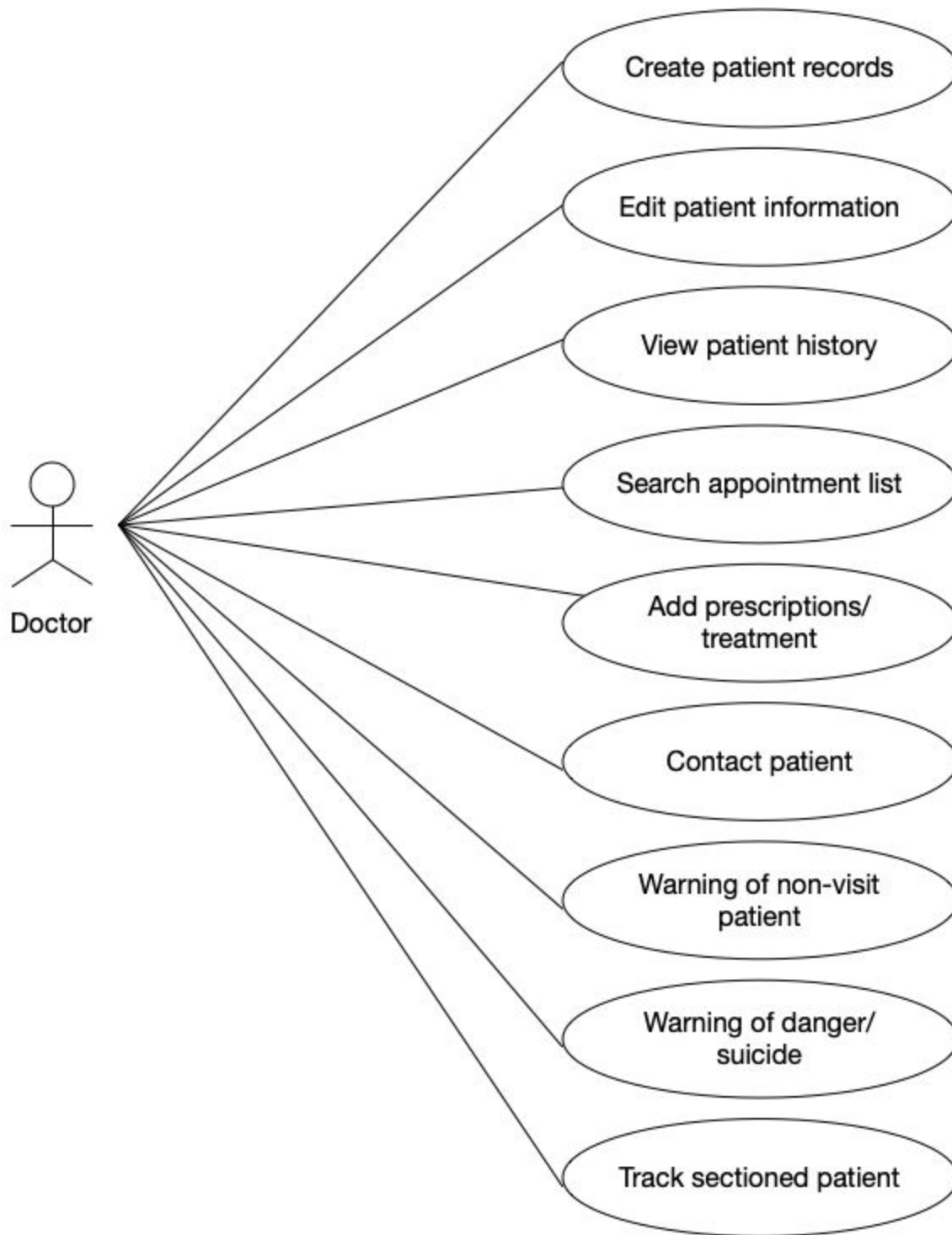
Problem 4 (10 points): UML Class Diagram: Kai Wang

Patient

private String patName
private Date patBirthday
private Double height
private Double weight
private Int phoneNumber
private PID patPID
private ArrayList<String> patHistory

Patient(String patName, PID patPID)
Patient(String patName, Data patBirthday, Double height, Double weight, PID patPID)

public String getName()
public void setName(String newName)
public Date getBirthday()
public void setBirthday(Date patBirthday)
public Double getHeight()
public void setHeight(Double height)
public Double getWeight()
public void setWeight(Double weight)
public Int getPhone()
public void setPhone(Int phoneNumber)
public PID getPID()
public void addHistory(String event)

1..*

attends

1..*

Consulation

Doctors
Date
Time
Clinic
Reason
Medication prescribed
Treatment prescribed

New()
Prescribe()
Treatment()
...

1..* prescribes 1..* **Prescription**

1..* prescribes 1..* **Treatment**

1..*

involves

1..*

Patient

private String patName
private Date patBirthday
private Double height
private Double weight
private Int phoneNumber
private PID patPID
private ArrayList<String> patHistory

Patient(String patName, PID patPID)
Patient(String patName, Data patBirthday, Double height, Double weight, PID patPID)

public String getName()
public void setName(String newName)
public Date getBirthday()
public void setBirthday(Date patBirthday)
public Double getHeight()
public void setHeight(Double height)
public Double getWeight()
public void setWeight(Double weight)
public Int getPhone()
public void setPhone(Int phoneNumber)
public PID getPID()
public void addHistory(String event)

1..*	Created by	1..*
1..*	Edited by	1..*
1..*	Viewed history by	1..*
1..*	Contacted by	1..*
1..*	Tracked by	1..*
1..*	Non-visit warned by	1..*

Doctor

private String DrName
private PID DrPID

Doctor(String DrName, PID DrPID)

public String getName()
public PID getPID()
public Patient createNewPatient(String Name, PID PatPID)
public void editPatient(PID patPID, String newInfo)
public ArrayList<String> viewPatHistory(PID patPID)
public ArrayList<Appointment> searchAptList(PID DrPID)
public void addPrescription(PID patPID, String prescription)
public void addTreatment(PID patPID, String treatment)
public void contactPatient(PID patPID)
public void warningNonVisitPatient(PID patPID)
public void warningDanger(PID patPID)
public void trackSectionedPatient(PID patPID)

1..* Warn danger patients to 1..*

1..* Search appointment 1..*

Clinic

Patients
Doctors

showAptList