Design document

Enterprises:

1. Accounting Unit
2. Emergency Unit
3. Equipment Unit
4. Management Unit
5. Medicine Unit

Organizations:

1. Admin Organization
2. Ambulance Organization
3. Billing Organization
4. Doctor Organization
5. Emergency Organization
6. Equipment Organization
7. Lab Organization
8. Medicine Organization
9. Patient Organization
10. Person Organization
11. Receptionist Organization

Roles:

1. Accounting Admin Role
2. Admin Role
3. Ambulance Role
4. Billing Admin Role
5. Doctor Role
6. Emergency Admin Role
7. Emergency Doctor Role
8. Emergency User Role
9. Equipment Admin
10. Lab Assistant Role
11. Management Admin Role
12. Medicine Admin
13. Medicine User
14. Patient Role
15. Person Role
16. Receptionist Role
17. System Admin Role

Problem definition:

1.Every day, people face emergency medical issues that can occur anywhere and at any time. At the time, medical assistance was limited, and a person's life could be at risk.

2. Fund allocation in any enterprise does not follow proper channels and must be routed properly and through a series of approvals.

3. The analysis of EMS injury data is a critical step in reducing the number of fatalities, and tracking the patient early can be life-saving.

Solution:

1.A system that connects pharmacists, ambulances, billing departments, hospital equipment, patients, and doctors to a single platform with flexible functionalities.

2. A platform where patients can remotely search for a particular doctor and book the appointment for the same and doctors are allotted according to the emergency issues.
3. A timely supply of medicines from pharmatics can help save the emergency patients.
5. The timely requests for lab reports from doctors can be reviewed and reported to patients.
6.Equipment or tool requests are correctly forwarded to Billing Organization and equipment are granted based on available funds, resulting in proper use of money and resources.

Work Requests:

1. AmbulanceWorkRequest
   Status: Accept, Reject, Process, Complete

2. BillingWorkRequest
   Status: Acknowledge, Reject, Accept, Complete

3. DoctorWorkRequest
   Status: Request Lab test

4. EmergencyPatientRequest
   Status: Accept, Reject, Process, Complete

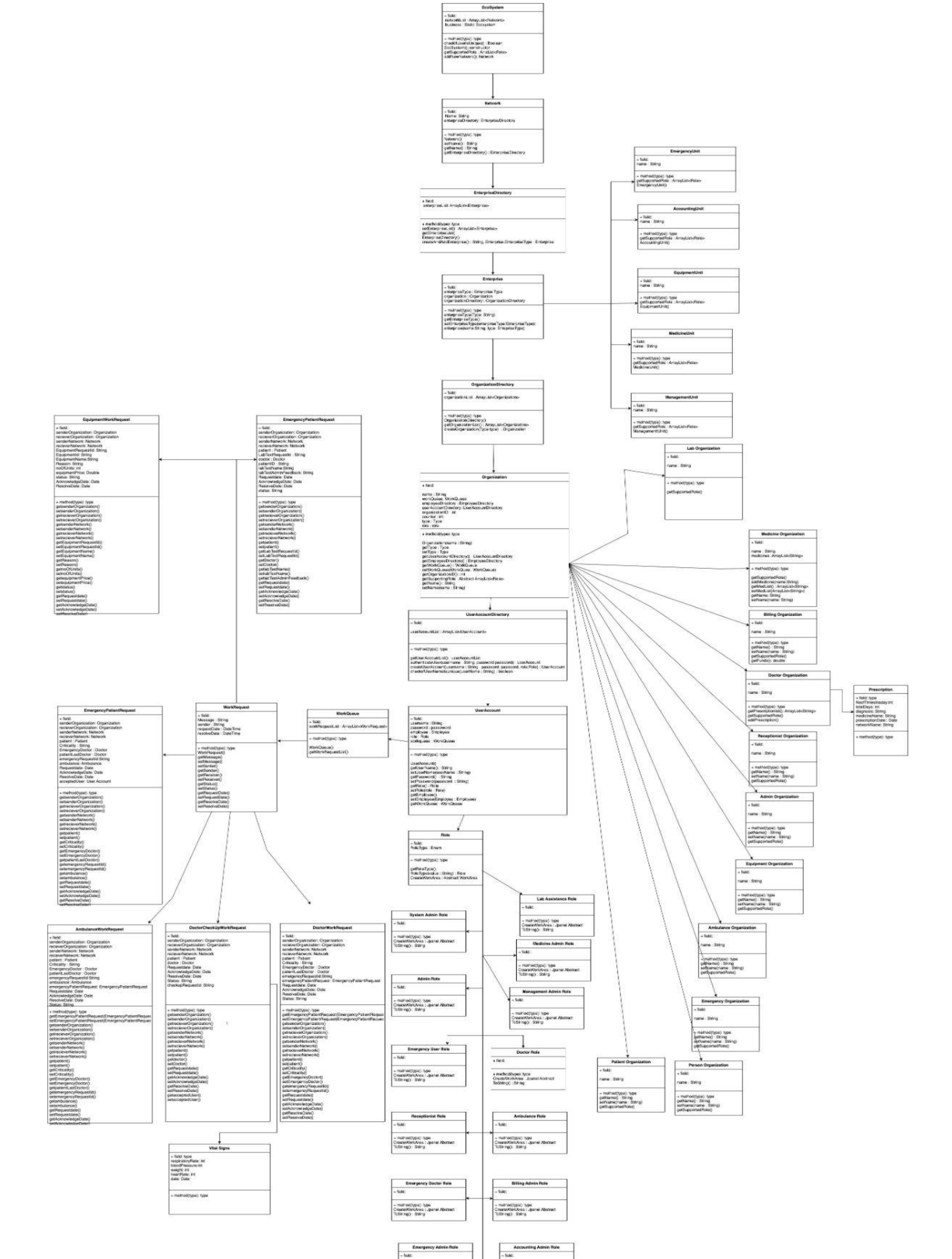
5. EquipmentWorkRequest
   Status: Request for equipment

6. LabTestWorkRequest
   Status: Accept, Reject, Process, Complete

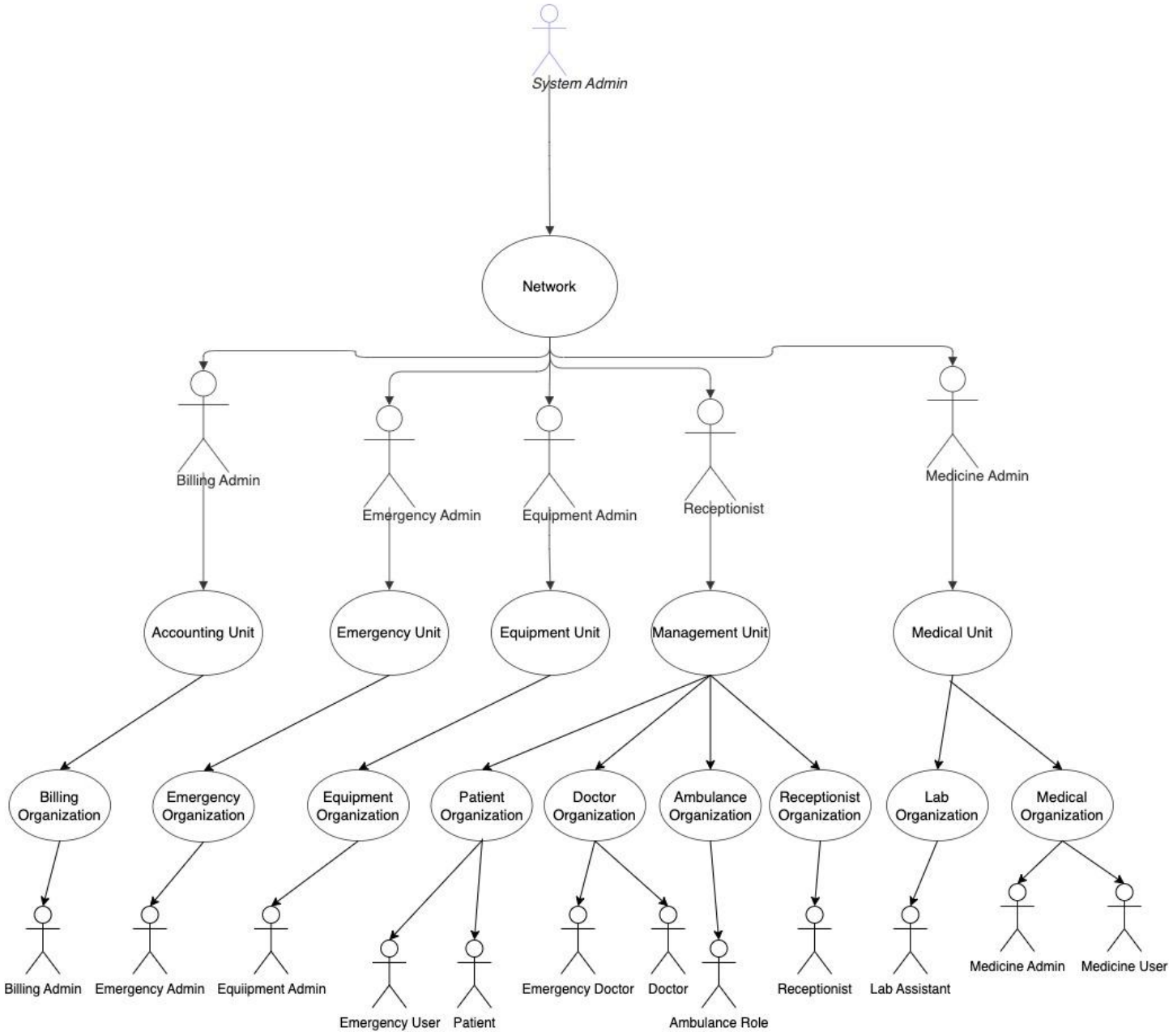
Reporting Module:
JFree Chart library is used to populate the statistical charts
Steps followed:
1. Add equipment data to a dataset using DefaultPieDataset
2. Pass the dataset to createPieChart method of ChartFactory class
3. Pass the chart to a ChartFrame and make that visible on the panel.

Engineering techniques followed:
1. Designed separate modules for business logic and userInterfaces
2. DB4O to store objects/instances of classes or business models
3. Followed Object Oriented Principles like Inheritance.

Class diagram


EcoSystem
Network
EnterpriseDirectory
Enterprise
OrganizationDirectory
Organization
UserAccountDirectory
UserAccount
Role
WorkRequest
WorkQueue
EmergencyUnit
AccountingUnit
EquipmentUnit
MedicineUnit
ManagementUnit
Lab Organization
Medicine Organization
Billing Organization
Doctor Organization
Prescription
Receptionist Organization
Admin Organization
Equipment Organization
Ambulance Organization
Emergency Organization
Person Organization
Patient Organization
EquipmentWorkRequest
EmergencyPatientRequest
AmbulanceWorkRequest
DoctorCheckUpWorkRequest
DoctorWorkRequest
Vital Signs
Lab Assistance Role
System Admin Role
Medicine Admin Role
Admin Role
Management Admin Role
Emergency User Role
Doctor Role
Receptionist Role
Ambulance Role
Emergency Doctor Role
Billing Admin Role
Emergency Admin Role
Accounting Admin Role

Use Case Diagram



Object Diagram