County Worker Recruitment and Management System

Simplified System Analysis & Design (School Presentation)

This document presents simple top-down diagrams for the County Worker system: Context, Use Cases, DFD (Level 0), Flowchart, and ERD.

Tools

- Laptop
- Flutter framework
- Dart language
- Python for back-end logic

Next Steps (to check on 30-Sep)

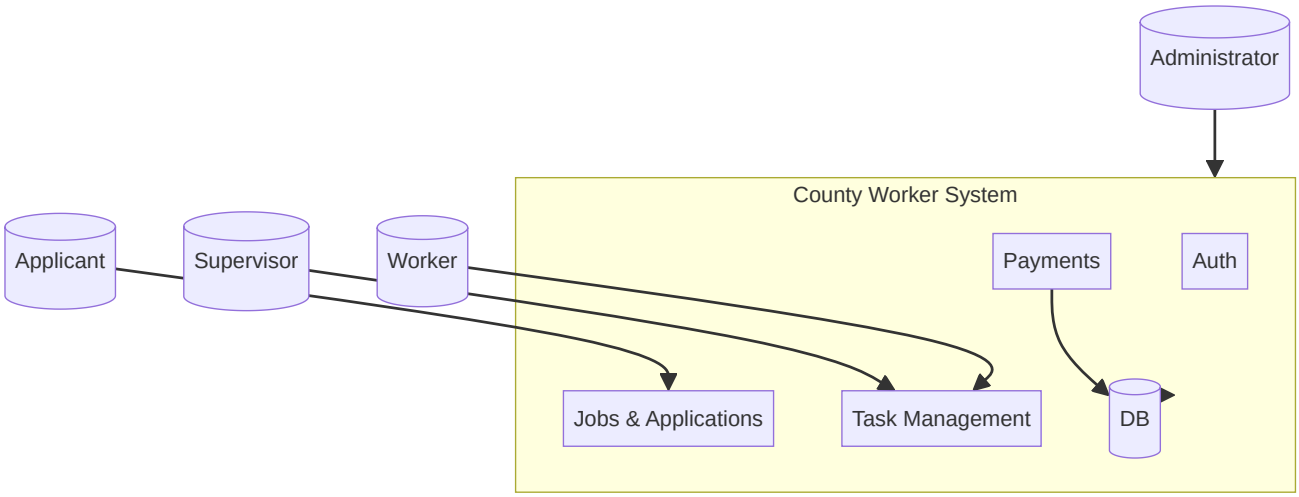
Design and model:

- **Flowcharts:** https://www.visual-paradigm.com/tutorials/flowchart-tutorial/
  - Sign up
  - Login
  - Job application
  - Account management
  - Contract processing
  - Task management and payments
- **Class Diagram:** https://www.visual-paradigm.com/guide/uml-unified-modeling-language/uml-class-diagram-tutorial/

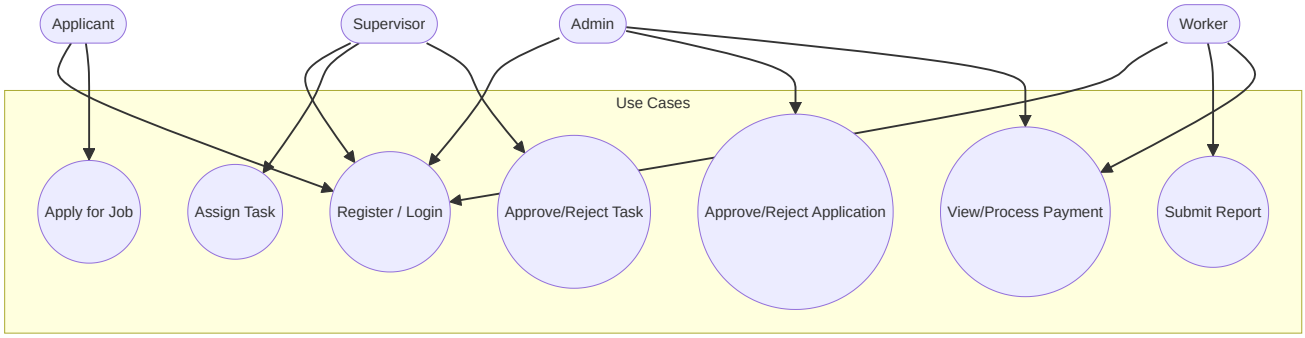
  ONE class diagram with the following classes:

  - User class (with four child classes):
    - Applicant_class
    - Worker_class
    - Supervisor_class
    - HR_class
  - Job class
  - Application class
  - Task class
  - Contract class
- **Use case diagram (of the entire system):** https://www.visual-paradigm.com/guide/uml-unified-modeling-language/what-is-use-case-diagram/
- **Sequence diagram (of the entire system):** https://www.visual-paradigm.com/learning/handbooks/software-design-handbook/sequence-diagram.jsp

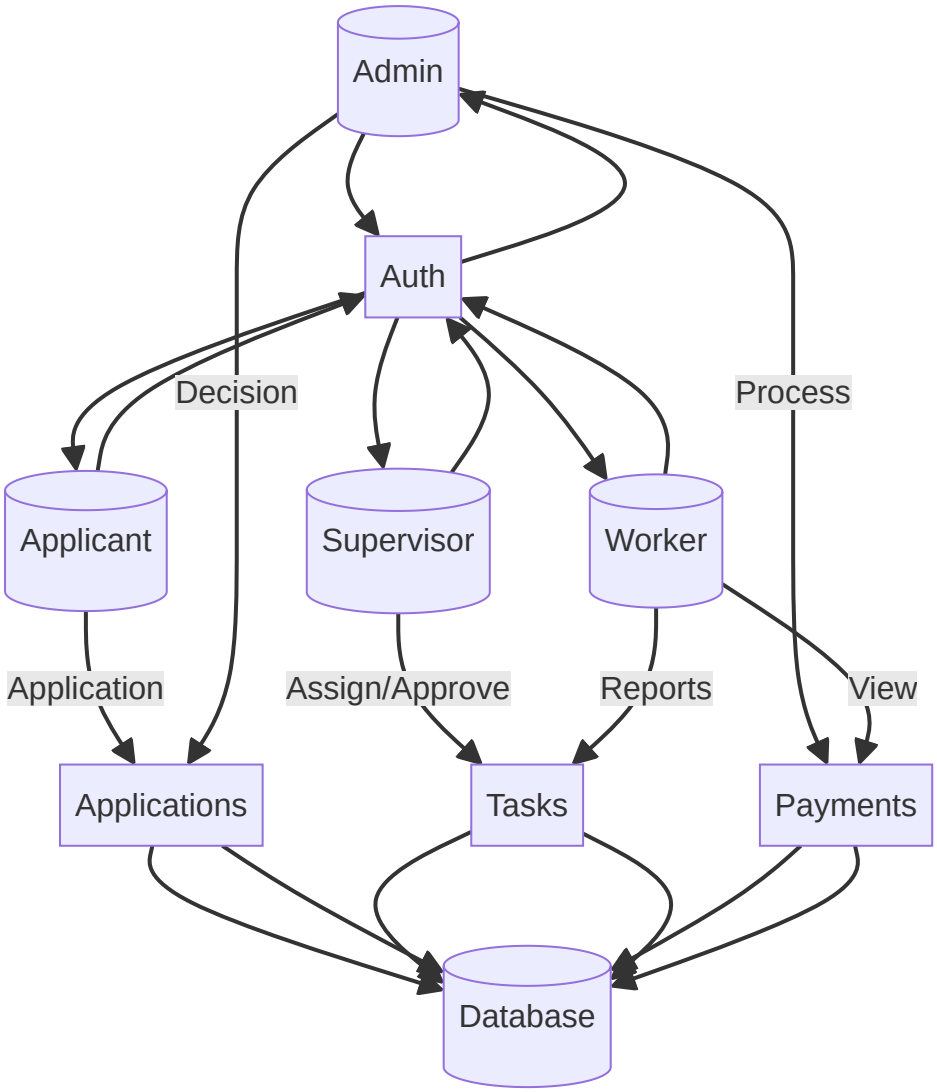
1) System Context Diagram



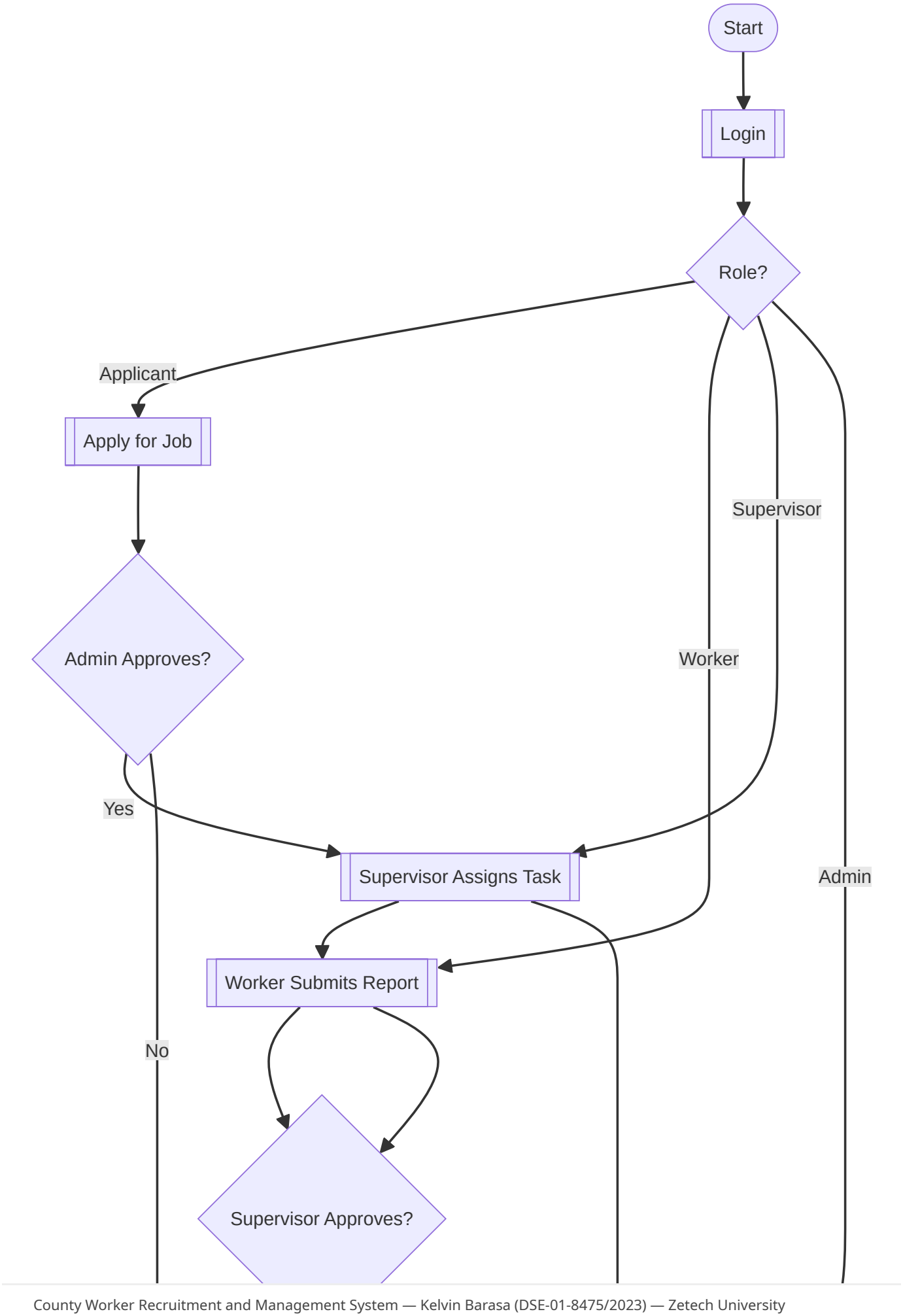
2) Use Case Diagram (Simplified)

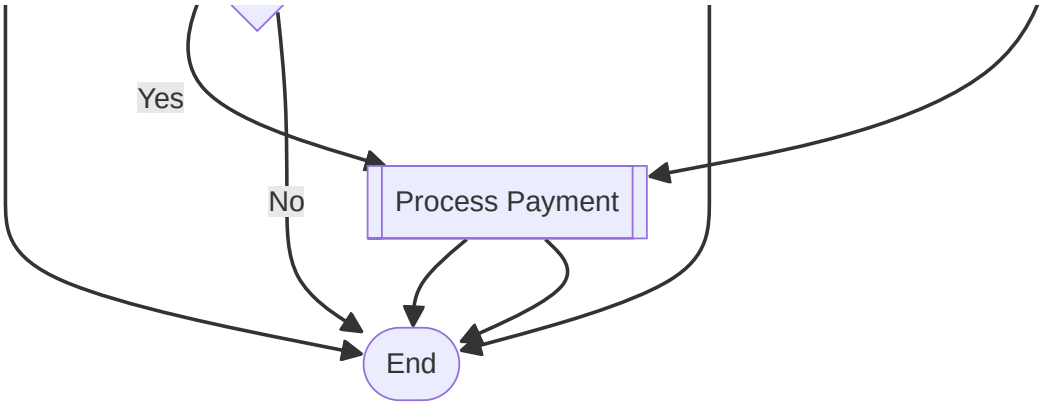


3) Data Flow Diagram – Level 0



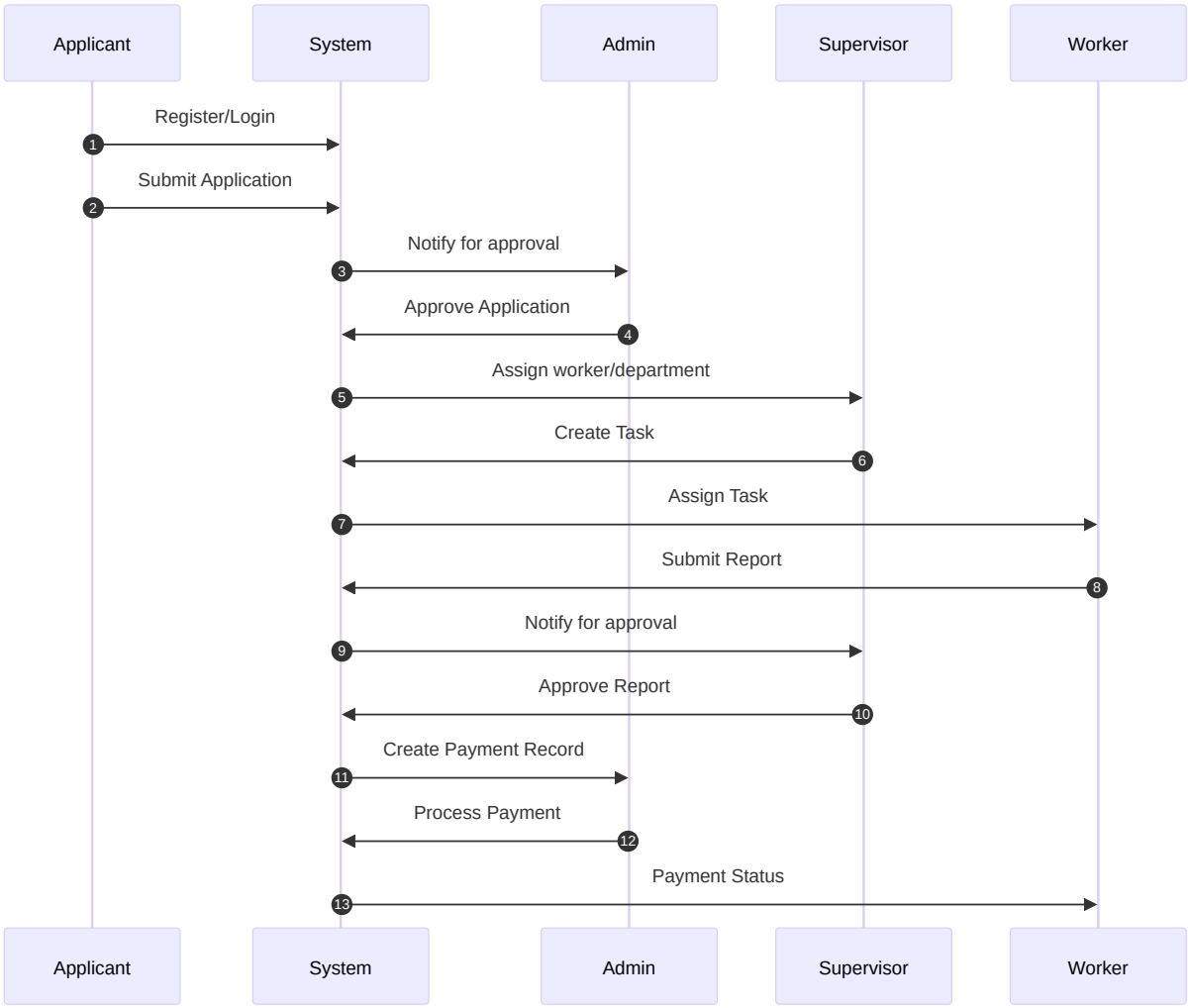
4) System Flowchart (Simplified)


Start
Login
Role?
Applicant
Apply for Job
Admin Approves?
Yes
No
Supervisor
Worker
Admin
Supervisor Assigns Task
Worker Submits Report
Supervisor Approves?



5) ERD (Simplified)

6) Sequence Diagram (Simplified)



Short Design Summary

- **Context:** Shows roles and the system boundary with key modules.
- **Use Cases:** Lists core actions for each actor needed for demo.
- **DFD L0:** Shows overall data movement between modules and users.
- **Flowchart:** Simple flow from login to approval, task, and payment.
- **ERD:** Minimal entities and relationships that match the running app.