Work Areas Lab

1. Configure ABusiness - populate the model with initial data. Business - this class contains an organisation directory. Organisation : Main idea of this class is in a business there can be multiple organisations and each organisation will have employee directory, user Directory and work queue. In each of these classes, like employee directory, there are employee as an object to this class, and user as an object to userDirectory class and workRequest as object to workQueue class. Each user will have an account which has a particular role which is connected to the organisation as it has multiple purposes and roles for its users.But the model does not have any specific role or specific organisation as it is a generic model. For specific allocation we need a specific model. Work Queue Model, which structures tasks as "WorkRequests" that flow between roles and organisations within the system. Each task is assigned to a specific role and tracked through various statuses, ensuring accountability and transparency throughout its lifecycle.
2. This is an extended version of the generic model where we can see there are three specific organisations and in that there are specific roles in each organisation. We can also notice that there is a separate workRequest that usually extends the workRequest class from the generic model. Admins are responsible for adding new employees, assigning roles, and setting up user accounts. They define the structure of various teams or departments, such as IT Support, Finance, or HR. By overseeing the work queue, Admins ensure tasks are assigned to the right teams and address bottlenecks when they arise. This workflow model can be effectively applied to a corporate task management system, especially in industries like consulting or technology.
3. As we start the ui we see an authentication page i.e login page for the admin where there are different features as we saw in model 3. The 3 feature buttons are connected to 3 different JPanel. We can see in ManageOrganisation JPanel, in the table initially it is seen that there is only 1 organisation in the table, so the remaining organisations are added by the admin to the table. After this in manageEmployee JPanel we have to add employees in different organisations and each organisation must have at least 1 employee in each organisation. A consulting firm uses this model for client PM(project management). The Project Manager creates a new task in the system for developing a client dashboard. The task moves to the Developer’s work queue, where they design and implement the dashboard. After development, the task is routed to the Quality Analyst, who ensures the final product meets the required standards.

Ecosystem model

1. The EcoSystem model represents a centralised structure integrating various networks, roles, and organisations. Its complexity lies in its hierarchical organisation and interdependencies. A single instance of the EcoSystem class (singleton pattern) ensures centralised control. Networks represent independent yet interconnected entities. Each network can host multiple organisations, roles, and users. This differs from domain models by emphasising **dynamic interconnections** and scalability across networks, whereas domain models often focus on representing static relationships between entities. The model’s complexity provides rich functionality but

may challenge user interaction. For example: Users need to navigate through multiple layers (network, organisation, role). Admins must manage dependencies between networks and their organisations. To mitigate this, clear and intuitive user interfaces are essential.

2. A key component of the ecosystem model is the network class. The Network acts as a container, connecting organisations and users within its domain. Networks bridge multiple organisations, enabling collaboration and data sharing. Each network operates independently but can contribute to the broader ecosystem. By adding or removing networks, the system grows without disrupting other components. Networks link with Organisations that manage roles like Admin, Lab Assistants, and Doctors.They interact with the WorkQueue for task delegation across roles. UserAccount and Employee entities operate within network-defined boundaries.
3. As the ecosystem model scales for a larger user base, one challenge is **network overload and latency**. For example,a heavily used network might slow down processing times for work queues or create bottlenecks in task delegation. Introduce distributed networks to share workloads efficiently. Developing dashboards tailored to specific roles, summarising tasks and minimising navigation time. Also, Implementing fine-grained permissions to ensure that users only interact with relevant data.