# Lab 3 – Plan and Monitor the Project



Complete the following tasks:

1. Using your System Vision Document from Workshop 2, identify and break your system down into smaller *subsystems*. List them here.
2. **Automated Order Processing**: The system automatically receives and processes customers' online pharmaceutical and prescription orders.
3. **Inventory Check**: The system automatically verifies whether the product is part of the deliverable stock for regular pharmacy orders.
4. **Prescription Verification**: The system automatically checks for authenticity and government compliance for doctor's prescription orders.
5. **Drone Dispatching**: The system automatically allocates drones for the delivery of pharmaceuticals.
6. **Customer Identity and Location Verification**: During the delivery process, the system verifies the customer's identity and location through a geolocation application.
7. **Real-Time Delivery Tracking**: Customers can track the status and location of their order and the drone through the system.
8. **Transaction Record Access**: Customers can access their transaction logs and view doctor information through the system.
9. **Customer Feedback Collection**: The system provides a feature that allows customers to leave feedback about their experience.
10. Select one of the identified subsystems and develop a Work Breakdown Structure (WBS) to describe the tasks required to be undertaken. Use the example below to model your initial answer.

Text, letter

Description automatically generated

**Work Breakdown Structure**

Iteration 1: Automated Order Processing Subsystem

I. **Project Planning**

* Develop WBS and build schedule, then plan the work — 0.5 days.

II. **Analysis Tasks**

* Analyze order processing requirements — 1 day.
* Identify online order processing workflow — 1 day.
* Define the information architecture and data elements for order processing — 1 day.

III. **Design Tasks**

* Design the database schema for order processing — 1 day.
* Design the order processing flow and user interface — 2 days.
* Determine the program classes and methods for order processing — 1 day.

IV. **Build Tasks**

* Build the database for order processing — 1 day.
* Write program code for order processing — 3 days.
* Implement real-time tracking of order status — 2 days.
* Create test data for order processing — 1 day.
* Set up the test environment — 0.5 days.
* Conduct user testing for the order processing flow — 1 day.
* Release the accepted version of the order processing system — 0.5 days.
* Perform code review and optimization — 0.5 days.

**Note**: The key features to be considered during this iteration include:

1. Receiving and validating online orders.
2. Handling the integration of orders with inventory.
3. Ensuring the accuracy and security of order data.
4. Real-time tracking of order status on the user interface.
5. Below is a different way of presenting a Work Breakdown Structure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task ID** | **Description** | **Effort** | **Resources** | **Predecessor** |
| 1 | Manage environment, code control, documentation | 2 days | PM | 0 |
| 2 | Layout, program, and review input screens | 3 days | P1 | 0 |
| 3 | Unit test input screen | 1 day | P1 | 2 |
| 4 | Verify fields and build database schema (4 tables) | 1 day | P2 | 0 |
| 5 | Program methods of 4 classes | 5 days | P3, P4 | 0 |
| 6 | Identify build test cases for add and update | 3 days | P2 | 4 |
| 7 | Unit test 4 methods of 4 classes | 2 days | P3, P4 | 5 |
| 8 | Write support programs to verify database updates | 2 days | P2 | 6 |
| 9 | Perform integration testing of all components -  view, logic, data layers. | 2 days | P1, P2, P3, P4 | 1, 3, 5, 8 |

1. Create a Gantt chart for the Work Breakdown Structure shown in the table above.
2. Identify the critical path.
3. Take a screen capture of your entire Gantt chart and paste it below.

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描述已自动生成

The critical path is From Task4 to Task9, The reason is that there are direct dependencies between these tasks, and there is no gap in between. Any delay in one task will affect the start of subsequent tasks, thus delaying the entire project.

1. Using the Work Breakdown Structure you developed in Question 2 above:
2. Create a Gantt chart. You may need to rework it into a table format as shown in Question 3 above.
3. Identify the Critical Path.
4. Take a screen capture of your entire Gantt chart and paste it below.
5. Work on your assignment.