

Figure 1: Gantt chart illustrating the project schedule for the development of a new software application. The chart displays tasks, their durations, start and end dates, and dependencies.

Task List:

- 1. Requirements Gathering (8 days, 2023-01-01 to 2023-01-08)
- 2. System Architecture Design (12 days, 2023-01-08 to 2023-01-20)
- 3. Database Design (5 days, 2023-01-08 to 2023-01-13)
- 4. Frontend Development (20 days, 2023-01-08 to 2023-02-07)
- 5. Backend Development (20 days, 2023-01-08 to 2023-02-07)
- 6. Integration Testing (10 days, 2023-01-20 to 2023-02-09)
- 7. User Acceptance Testing (10 days, 2023-02-09 to 2023-02-19)
- 8. Deployment (5 days, 2023-02-19 to 2023-02-24)
- 9. Post-Deployment Support (10 days, 2023-02-24 to 2023-03-06)

Dependencies:

- Task 2 depends on Task 1.
- Task 3 depends on Task 2.
- Task 4 depends on Task 2 and Task 3.
- Task 5 depends on Task 2 and Task 3.
- Task 6 depends on Task 4 and Task 5.
- Task 7 depends on Task 6.
- Task 8 depends on Task 7.
- Task 9 depends on Task 8.

Summary:

The project is scheduled to start on 2023-01-01 and end on 2023-03-06. The total duration is 86 days. The critical path is: Requirements Gathering (8 days) -> System Architecture Design (12 days) -> Frontend Development (20 days) -> Backend Development (20 days) -> Integration Testing (10 days) -> User Acceptance Testing (10 days) -> Deployment (5 days) -> Post-Deployment Support (10 days).