It follows four steps

1.Decomposition

2 pattern recognition

3.Abstraction

4.Algorithm

\***\*Decomposition:**

**1.Identifying the course**

**2.prerequisites analysis**

**3.Seduleling courses**

**4.Resource allocation**

\*\***Pattern Recognition**:

1.Getting the course videos of before

2.Scheduling patterns of courses

3 Prerequisites structures

\*\***Abstraction:**

**1.Concentrating on the courses and Deadlines**

**2 Neglecting the other courses which is not related to the particular departments**

**Algorithm:**

**1.Data collection and preparation**

Such as course details,instructor for the course,

2.**Build course Dependency graph**

3 **sorting the courses based on their prerequisites**

**4. Creating time slots**

**5. Assigning the courses as per the order**

**6. Checking for any problems in course management**

**7.optimization by using any algorithm**

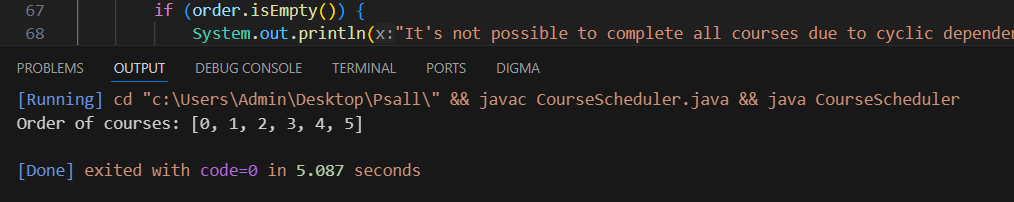
The above problem can be solved in a **topological sort algorithm because it has prerequisites.**

**Identify a starting point:** Find a vertex with no incoming edges (a source vertex).

**Visit the vertex:** Include this vertex in the topological order.

**Remove edges:** Remove all edges going out from the visited vertex.

**Repeat: Go back to step 1 and find the next vertex with no incoming edges.**

**Handle cycles: there should be form cycles**