Project Overview:

This is a **graph-based pathfinding tool** designed to find the shortest route between two districts in Bangladesh. The tool considers both the **distance** between districts (in kilometers) and the **cost** (in local currency, Taka). It uses a traversal algorithm to explore the possible routes and outputs the shortest path, along with the total distance and cost.

Key Features:

1. **Graph Representation**:
    - The districts are represented as nodes in a graph.
    - The connections between districts (roads) are edges that have two associated attributes:
        - **Distance** (in kilometers)
        - **Cost** (calculated based on distance, with a fixed rate per kilometer)
2. **Pathfinding**:
    - The program allows the user to input a **starting district** and an **ending district**.
    - It then explores the possible paths and computes the shortest route based on distance and cost.
3. **Output**:
    - The shortest path is displayed, showing the sequence of districts and the roads between them.
    - The total **distance** (in kilometers) and the **total cost** (in Taka) for the journey are also provided.

Graph Structure:

- **Nodes**: Represent the districts (e.g., Bagerhat, Khulna, Dhaka).
- **Edges**: Represent the roads between districts, each having a distance and a cost (distance * rate).

User Interaction:

- The user is prompted to enter the starting and ending districts.
- After processing, the program will print out the best route and the associated travel details, including distance and cost.

Usage Example:

- **Input**: User enters the starting district as "Dhaka" and the destination as "Rajshahi".
- **Output**: The program finds the shortest route and prints something like:

yaml

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Path from Dhaka to Rajshahi:

Dhaka -> (30 km, Cost: 75 Taka) -> Manikganj -> (50 km, Cost: 125 Taka) -> Rajshahi

Total Distance: 80 km

Total Cost: 200 Taka

Potential Use Cases:

- This tool can be helpful for individuals or businesses planning travel between districts, especially in terms of cost optimization.
- It could be extended to include more real-world data such as traffic conditions or alternate routes.