Detailed Project Outline and Work Division

1. Project Overview

The project involves:

- **Network Design**: Using Cisco Packet Tracer to create a cost-effective, secure, and scalable network for a new office building.
- **Messaging App**: Developing a portable, Windows-compatible text messaging app that works over the Internet.
- **Documentation**: Compiling reflections, work ethics, project management records, network design reports, and app documentation.
- **Presentation**: Preparing files and videos for the final demo.

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2. Breakdown of Tasks

Group Task 1: Preparation (Deadline: 29 March)

- **Individual Tasks**:
  - Complete 5 online courses (time management, Git/GitHub, project management, Cisco Packet Tracer).
  - Write a 250-word reflection on soft skills learned.
- **Group Tasks**:
  - Meet to discuss roles, work ethic, and project timeline.
  - Draft and submit reflections, work ethic, and timeline (submitted by the leader).

Group Task 2: Continuous Reporting (Ongoing)

- Maintain meeting notes, attendance, and task records.
- Use GitHub for project management.
- Track milestones and report progress (handled by the leader).

Group Task 3: Network Design (Deadline: 19 April)

- **Sub-tasks**:
  - Analyze building layout and requirements.
  - Design network topology (routers, switches, subnets, VLANs).
  - Simulate and test the network in Packet Tracer.
  - Create a budget for network hardware.
  - Document the design, including security and remote access solutions.

Group Task 4: Messaging App (Deadline: 16 May)

- **Sub-tasks**:
  - Research and select tools/languages (e.g., Python with Tkinter, Electron.js).
  - Develop GUI, messaging functionality (individual/group chats), and Internet connectivity.
  - Ensure portability (no installations required).
  - Test the app on Windows 10/11.
  - Document the development process and user guide.

Final Submission (Deadline: Before Demo)

- Compile all documentation (reflections, work ethic, network report, app documentation).
- Prepare Packet Tracer files, app files, and presentation materials.
- Submit on eFundi.

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3. Work Division for 6 Team Members

Role	Tasks	Assigned to
Project Leader	Coordinate meetings, track progress, submit deliverables, handle conflicts.	Member 1
Network Designer 1	Design network topology (routers, switches, VLANs), configure subnets.	Member 2

Network Designer 2	Simulate and test the network in Packet Tracer, document the design.	Member 3
App Developer 1	Develop app GUI and core messaging features (send/receive texts).	Member 4
App Developer 2	Implement Internet connectivity and portability, test on Windows.	Member 5
Documentation Lead	Compile reflections, work ethic, budget, network/app documentation.	Member 6

Shared Responsibilities:

- All members contribute to meetings, GitHub updates, and peer reviews.
- Network designers collaborate on budget and security.
- App developers work together on testing and debugging.
- Documentation lead ensures all reports are cohesive and submitted on time.

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4. Timeline with Contingencies

- **29 March**: Complete Task 1 (reflections, work ethic, timeline).
- **19 April**: Finish Packet Tracer design and documentation.
- **16 May**: Complete messaging app and finalize all deliverables.
- **Buffer**: Add 20% extra time (e.g., 1–2 weeks) for delays.

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5. Tools & Collaboration

- **GitHub**: For version control and task tracking.
- **Packet Tracer**: For network simulation.
- **Communication**: Slack/Teams for updates, Zoom for meetings.
- **App Development**: Python (Tkinter), Electron.js, or similar portable frameworks.

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6. Conflict Resolution

- Follow the disciplinary process (warnings, hearings, appeals) if members underperform.
- Adjust marks post-demo for fairness (documented in the mark adjustment form).

Final Notes

- **Keep it simple**: Avoid overcomplicating the network or app.
- **Prioritize deadlines**: Late submissions incur heavy penalties.
- **Communicate early**: Address issues before they escalate.

This division ensures balanced workloads while covering all project requirements. Adjust roles based on individual strengths (e.g., coding vs. networking skills).