

# Project Proposal

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**Title: University Wireless Network Simulation**

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## 1. Introduction

Universities today require digital campuses that provide mobility, flexibility, and reliable connectivity. Wireless networks reduce cable dependency and allow students and staff to access resources anytime, anywhere.

## 2. Problem Statement

Traditional wired networks restrict mobility. To meet academic and hostel needs, the university requires a wireless network that ensures connectivity, core services (DNS, Email, Web), and secure access.

## 3. Objectives

- Design and simulate a wireless campus network using Cisco Packet Tracer.
- Provide seamless connectivity across campus and hostel areas.
- Ensure mobility, scalability, and security.
- Integrate essential servers (DNS, Email, Web).

## 4. Methodology

- Create topology with routers, switches, access points, servers.
- Plan IP addressing and configure secure SSIDs.
- Implement security (SSH, strong passwords).
- Test using ping and simulation tools in Cisco Packet Tracer.

## 5. Expected Outcomes

- Functional wireless network simulation.
- Mobility for laptops, PCs, and smartphones.
- Reliable services (DNS, Web, Email).
- Secure and scalable network design for a digital campus.