README for Course-Project
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Description:
This project provides a discussion on utilizing reinforcement learning (Q-learning) on a Wireless Sensor Network (WSN) routing based on link reliability. The project presents routing results on static, sparse random and dense random scenario.

Contents:

File	Description
sensors.py	Provides sensor layout and assigns channel link quality
q_learning.py	Implements Q_learning algorithm
main_static_1.py	Main application for Static-1 Scenario (link quality fixed)
main_static_2.py	Main application for Static-2 Scenario (link quality fixed but different than above)
main_static_0.py	Main application for Static-0 Scenario (link quality random)
main_random_sparse.py	Main application for Sparse Random Scenario
main_random_dense.py	Main application for Dense Random Scenario

Dependencies (library):
numpy, pandas, matplotlib, seaborn, scipy

Compile and Run:

Scenario Static-1: Sensor Layout Fixed, Link Quality Fixed
python main_static_1.py

Scenario Static-2: Sensor Layout Fixed, Link Quality Fixed but different than before
python main_static_2.py

Scenario Sparse Random: Sensor Layout Random and sparse in number, Link Quality random
python main_random_sparse.py

Scenario Dense Random: Sensor Layout Random and dense in number, Link Quality random
python main_random_dense.py

Details:
Find the details in the final report.