Addressing urban mobility challenges, this context-aware route planner integrates location-based data with air quality measurements and traffic dynamics to redefine travel efficiency. The initiative aims to bolster health and environmental conditions for urban commuters by identifying routes that curtail exposure to pollutants. Leveraging the computational power of Dijkstra’s and Bellman-Ford algorithms, the system adeptly navigates complex network data, pinpointing routes that balance travel time against air quality. Real-time insights from PM10 and PM2.5 sensors enhance route recommendations, providing critical environmental health data. Utilizing a linear weighting approach, the planner assesses and prioritizes pathways based on health and environmental criteria. Supported by thorough simulations and real-world data integration, this innovative system promises to transform urban mobility by promoting healthier, environmentally friendly travel options, thus significantly enhancing both public health and urban life quality.