Abstract:
IntelliRoute is a web application that finds several alternate routes from Point A to Point B, and chooses the quickest route by taking into account real-time traffic conditions. The web application is complemented by a PDA application, so commuters have a simple way to bring the driving directions into their cars.

Breakdown:
Database Application - Accesses, parses, and stores real-time traffic data. Currently I only have access to real-time traffic data for the San Francisco Bay area of California and for the State of Illinois. I choose these two areas because their data is easily accessible and because my server has severe limitations.
Web Application - Finds the quickest route between Point A and Point B using the real-time traffic data in the IntelliRoute database. Then returns a map of the route with detailed instructions, which can be downloaded onto the user’s computer.
PDA Application – Displays downloaded routes and has the ability to use the IntelliRoute Web Application if there is an internet connection.

Technical Approach:
Database Application:
The Database Application involves a database which contains real-time traffic data and a windows service which updates that data every 30 minutes.

Database Relationships:

User Account

PDA Application:
The PDA application is fairly simple. The main application form can spawn off one form that lists all the saved routes and one form that visits the website of the web application. After being spawned, these three forms can be toggled. The form that lists saved routes can then spawn off another form that actually displays the map and directions of a specific route. Once the main form is closed, all other existing forms are also closed.

Overall System Design

Conclusion:
Currently, the program code and overall architecture design of this project is fairly complete, but the database part is far from complete due to the lack of start and end exit information for highway sections. I do believe with time and as more databases become available, that information can be acquired.