Requirements Draft

1. System shall have a user interface
   1. GUI
      1. Field for origin
      2. Field for destination
      3. Field for sorting
         1. Cost
         2. Time
         3. Airline
      4. Display results
      5. Add airports
      6. Add routes
         1. Add airline based on routes
      7. Delete
         1. Airports
         2. Routes
      8. If an airport is deleted, so are associated routes
      9. Display most current route information (all routes in network)
      10. Display airports that can be reached from a given airport
      11. Display airlines that service a given airport
      12. Display air route info for a given route
      13. Close airport for a given time interval
2. System will read input file for display
3. System will allow user to choose origin
4. System will allow user to choose destination
5. System will give error if destination is not accessible from origin
6. System will auto connect flights
   1. At least 30 min between connecting
7. System will allow user to enter flights
   1. Error if less than 30 minutes
   2. Error if starts before midnight
   3. Error if ends after midnight
   4. Flight cannot start before it ends
   5. Price must be positive value
8. System will allow user to add airports
   1. Must be three letter identifier
   2. Initialize added airport without any added routes
9. System will display results based on filter selected
   1. Cheapest flight
      1. Total price of flight
      2. Total travel time (including layover)
      3. Paths used
   2. Shortest total time
      1. Total price of flight
      2. Total travel time (including layover)
      3. Paths used
   3. Uses one airline most
      1. Total price of flight
      2. Total travel time (including layover)
      3. Paths used
   4. All three at once
10. System will allow user to close airports
11. System will allow user to delete airports
    1. Associated routes will be deleted as well
12. System will allow user to delete routes
13. System will have a menu bar
    1. Ability to
       1. Filter routes
       2. Add routes
       3. Close airports
       4. Add airports
       5. Delete airports
       6. Delete routes
    2. Save button to save changed
14. System will allow user to close airport
15. System will allow user to open closed airport
16. System will give error trying to open an open airport
17. System will give error trying to close a closed airport