The Great Mind Challenge - Project Scenario Template

Note: Already filled information should not be changed

1.	Name of the Project	GPS Based Air Traffic Simulation
2.	**Objective/ Vision**	The current air traffic control systems depend of the age old technology of locating the air crafts using radar systems. The radar systems have limitations in tracking the exact locations of flights in areas that cannot be cover using the most powerful long range radars. This limitation of tracking the exact locations of aircrafts can be improvised if the air traffic control systems use the global positioning systems satellites. The exact location of the air craft is crucial information that is required while scheduling flights, runways, take off landings and en-route flight proximity. The aim of this project shall be to incorporate the GPS tracking system for air crafts in Air Traffic Control Systems.
3.	**Users of the System**	A. Air traffic Control officials B. Pilots C. Air port managers D. Flight Schedulers
4.	**Functional Requirements (Atleast Eight)**	i.The software should track the exact location of air craft at any given instant of time. ii.The software should enable the user to schedule runways for scheduling takeoff from the source air port. iii.The software should enable the user to schedule runways for scheduling landing on the destination air port. iv.The software should notify the user the status of other flights in proximity of its flight path. v.The software should be smart to suggest flight path alteration to avoid mid air collision. vi.This feature shall also be used but the flights while hovering due to congestion or unavailability of runway due to weather problems. vii.The software should enable the users to maneuver the flight path at any given time before the flight takes off and also when the flight is air borne. viii.The software should generate various reports based on the information collected.
5.	**Non-functional requirements (At least Four)**	i. Secure access of confidential data (user's details). SSL can be used. ii. 24 X 7 availability iii.Better component design to get better performance at peak time iv.Flexible service based architecture will be highly desirable for future extension
6.	**Optional features**	a. System Alerts if the flight drifts from its original flight path. b. Weather forecast and alerts for the flight designated flight path and automatic updates from time to time. Based on the weather conditions.
7.	**User interface priorities**	A. Professional look and feel B. Use of AJAX at least with all registration forms C. Browser testing and support for IE, NN, Mozilla, and Firefox. D. Use of Graphical tool like JASPER to show strategic data to admin E. Reports exportable in .XLS, .PDF or any other desirable format

8.	**Reports**	A. Daily, Weekly or monthly report for Runway schedule. B. Report for flight path. C. Report for Take off and landing for each flight. D. Weather Report for the flight path.
9.	**Other important issues**	A. B.
10.	**Team Size**	2 - 4
11.	**Technologies to be used**	UML, J2EE, XML, e-Forms, AJAX, Web 2.0, Web-services, SOA
12.	**Tools to be Used**	•ROSE/RSA / WebSphere Modeler •Eclipse/ RAD / Lotus Forms Designer / Portlet Factory •WebSphere Portal/ WAS/ WAS CE / WPS •DB2 Express – 'C' or DB2 UDB •Linux will be the preferred OS.
13.	**Final Deliverable must include**	A. Online or offline help to above said users, Application deployment executive and developer B. Application archive (.war/.ear) with source code C. Database backup and DDL Script D. Complete Source code E. SRS F. Low Level Design Document G. High Level Design Document