Project Scope

Note: This document is intentionally incomplete and is in non-standard format; as part of the course this document will be re-written.

Project Scope:

The University of Iowa is very conscious of the need to save energy and natural resources. The state of Iowa has also made many initiatives to cut energy usage and increase energy efficiency. However personal automobiles are the main mode of transportation in Iowa. While it is a great accomplishment that University of Iowa has an active van pool program, much more can be done. Less than 5% of the employees are estimated to be using the van pool service even though it has been in use for 30 years. And that is about the best performance from any enterprise!

Use of personal automobile increases the demand for parking space, fuel usage and the cost of living. It is observed that most people have standard daily routines. It should be possible to increase the usage of pooling.

There are also other businesses (not just Univ. of Iowa) whose employees also use their personal vehicles to get to work.

Why? (Possible causes).

- **Some people are not aware of these programs**
- **Lack of a web enabled online application that can allow you to search for an available van/vehicle**
- **Not having transportation during urgent needs**
- **Worries about cost**
- **Convenience & comfort of personal vehicle**
- **Lack of security**
- **Lack of privacy**
- **Absence of a calculator which tells them the cost benefit**
- **Lack of such a program for people travelling to Cedar Rapids and Quad City area for example.**

Such a van facility is expected to attract Iowa and surrounding passengers in a big way. The Vanpool software system must be simple, easy to use and offer very high performance.

The Iowa City area agencies would be very keen to have a software application that can be used to for this service. It must cater to people living in Iowa city and driving to other towns like Quad City area and Cedar Rapids to work. While we have a good idea of the requirements, we would like help from your group to draft the requirements and develop this application within the next 3 months.

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Phase 1 needs to be implemented by April end of this year which means that a well tested demo system must be launched that time.

Customer contact (Raman) will provide additional details of requirements, if requested by the Project team.

Vanpool Service System (VSS)

Customer contacts: Raman, Nabeel.

General Requirements:

1. **Must use the principles of Software Engineering**
2. **The tool should be user friendly & require minimal data entry. The Software development team and the Business analysts are required to suggest the specific user friendly features while drafting the User Requirement Specifications. Some examples of user friendly features may be**
   a. **minimum data entry**
   b. **data transfer from context sensitive help screens**
3. **The system must support user Id / Password based authentication and must offer the best security features. The software development team is required to identify (in URS) the specific security features to be incorporated in VSS. Some examples of such security features may be**
   a. Data encryption techniques (128 bit)
   b. Invisible password
   c. Structure of Password
   d. Password change policy
   e. User Id / Password retrieval policy
4. **The System must provide three levels of users**
   a. Drivers
   b. Passengers
   c. System Administrators
5. **Objectives and capabilities of this tool are as follows:**
   a. Authentication, Forgot password, Security Questions
   b. Addition of Vans / Vehicles. Owned, Shared
   c. Driver Management and assignment to vehicles
   d. Location Management
   e. Search From and To
   f. Cost Savings Calculator
   g. Passenger Management and Ridership
   h. Van/Vehicle Riders Management
   i. Basic Billing
   j. Sys Administration tasks
   k. Additional use cases are being defined.

Project Scope

Non Functional and Operational requirements from project team:

- **Each Team must pick a Team Leader**
- **Team work is very important**
- **Team members must have a minimum of 1-2 meetings a week.**
- **Meetings should be well planned and should preferably be less than 30 minutes in each meeting.**
- **It is highly recommended that teams meet once right after class every week.**
- **Distributed teams are a matter of fact; technology should be used to meet from remote, if it is convenient.**
- **Team must submit more detailed schedule and get it approved.**
- **The team may choose programming tools get it approved.**
- **Use of tools and automation will be recognized. Automated testing is mandatory.**
- **The work done in each stage of software development must be acceptable to the customer before the team may proceed with the next stages.**
- **All members of the team must assume specific responsibilities for each activity of software development**
- **The customer must be informed of the Roles and Responsibilities**
- **The tools required for the project will NOT be provided by the customer**
- **Due to acute shortage of resources, the customer is able to meet with project teams only on a pre-arranged basis.**
- **All documents must be delivered using ICON dropbox; hard copies will be requested as needed.**
- **Teams must develop the Screens and demo the screen flow before developing the full version.**

Tools: The project team may select & use any tools required to deliver the functionality; but must require Customer approval.

VSS (Specific Deliverables):

Deliverables:

- All documents must be delivered using ICON drop box.
- Teams must develop the Screens and demo the screen flow before developing the full software.
- Teams need to submit an Iteration plan identifying the functions to be delivered.

Project Scope

Define-Analyze-Design-Develop-Test-Implement

Specific Deliverable schedule:

#	Deliverable Description	Due on or before
Plan	**Documentation Guidelines (1-2 pages max)**	
Plan	**Project Plan** with Master Project Schedule, Estimation work sheet, Roles and Responsibilities, Risk Management Plan, Process Model Implementation, Collect Requirements for initial set of functions.	For whole project but revised for each iteration
Define	**User Requirement Specification (URS) – Use cases**	For whole project but revised for each iteration
Test	**Test Plans**	For whole project but revised for each iteration
Analyze	**Software Requirements Specification (SRS) Models, Analysis, Data Dictionary, Specific Requirements.**	For each iteration
Design	**High Level Design (screens, database, architecture)**	For each iteration
Develop, Test, Implement	**Working software deliverable Iteration #1**	**Feb End**
	Working software deliverable Iteration #2	**March End**
	Working software deliverable Iteration #3 - Final	**April End**
Present	**Final Team Presentations**	Last week of class

Revision Log

Date	Version	Description of change
1/29/2018	**1.0**	**Initial version**