**[Skip navigation links](http://shuspace.shu.ac.uk/webapps/blackboard/content/listContent.jsp?course_id=_218043_1&content_id=_2561797_1&mode=reset#endNav)Web Application Design and Implementation**

**National Car Pool Company Case-study**

**Team Assignment**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MON** | **TUES** | **WED** | **THURS** | **FRI** | **SAT** | **SUN** |
| **5** | **6** | **7** | **8** | **9**  **1st Submission**  **3pm** | **10** | **11** |
| **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **19** | **20** | **21** | **22** | **23**  **2nd Submission**  **3pm** | **24** | **25** |
| **26** | **27** | **28** | **01** | **02** | **03** | **04** |
| **05** | **06** | **07** | **08** | **09** | **10** | **11** |
| **12** | **13** | **14** | **15** | **16**  **3rd Submission**  **3pm** | **17** | **18** |
| **19** | **20** | **21** | **22** | **23** | **24** | **25** |

**Web Application Design and Implementation Assessment**

**Assignment Brief**

Design and Implement a Multi-page Web Application. In the course of the module you will learn numerous techniques which allow you to design and build Web applications using UML, HTML, JavaScript and AngularJS. This assignment gives you an opportunity to consolidate your skills in order to investigate, design, and implement the concepts of a working Web application.

**Case study**

We are a taxi management company. Currently we have a fleet of taxis that are booked using our online site and phone system. That part of the business seems to be well established and the system is running well.

We have come up with the revolutionary idea of people being able to share taxis. The site will record details of taxis that have been booked. In addition (and this is the clever bit), we would like the site to allow our staff to add passengers to existing bookings, based on the route and capacity of the existing booking. While doing this they should record the location of the customer and the destination. Passengers should be able to call up and book taxi for their journey.

Each taxi has a pre-defined maximum number of passengers who can share the car. This will be 3, 5 and 7 depending on the size of the car. Staff at the booking office should be able to keep track of how many passengers are in a car at any one point. They should be able to add a passenger booking to a particular car. Managers should be allowed to edit/delete a car booking.

The site should also allow managers to add new vehicles and routes to the system as they become available.

**Tasks**

1. Produce functional and non-functional requirements based on the client requirements. Don't forget to document your assumptions
2. Produce a use case diagram and use case descriptions.
3. Produce a sequence diagram based on the use case descriptions.
4. Produce a web application that addresses the client requirements. For your web application you must use HTML, CSS, JavaScript and AngularJS.

**Submissions**

You will submit your assignment as a number of submissions, each building on the previous one. First two submissions are optional. You are advised to submit draft work for feedback to help you improve your work before you final submission. Each submission is relatively small and manageable and this should help you better manage the workload.

Here are the requirements for each submission

First submission

* Functional and Non-functional requirements

Second submission

* Use case diagram and sequence diagram

Final submission

* Refined functional and non-functional requirements
* Use case diagram and sequence diagrams
* Produce a web application that addresses the functional requirements

Resources

* Learning Materials covered in the module
* Additional external web-based materials identified by the teaching team
* Additional reading materials indicated throughout the teaching of the module
* Access to staff:
  + Dharam Shadija
  + Jacky Stallard

Assignment Submission

**First submission**

Functional and non-functional requirements plus any supporting assumptions

Deadline: 09th February 2018

**Second submission**

Use case diagram, use case description and sequence diagrams

Deadline: 23rd February 2018

**Third submission**

Refined functional and non-functional requirements

Refined use case diagram and sequence diagrams

Web application

You must submit your work using link available on BB.