

### Assessment Task 3 Mobile Apps Project

<b>Due date:</b>	11:45 pm Friday of Review/Exam Week	<b>Project</b>
<b>Weighting:</b>	50%	
<b>Length:</b>	Less than 50 MB	<b>1</b>

#### Objectives

This assessment item relates to the course learning outcomes numbers 2, 3, 5 and 6 as stated in the online course profile.

The objectives of this assignment:

1. For your creative work you are going to design, specify, implement, and test a Hybrid App. You are to come up with your own idea for the app. Keep it simple as you have only a day a week during term to prototype and develop this idea.
2. Client - Develop, test and maintain a mobile internet application using an integrated suite of mobile software development tools. More specifically on the client-side jQuery, jQuery Mobile, JavaScript, HTML5, and CSS.
3. Server - Develop, test and maintain an Express Web Server and API using JavaScript and node with various node packages. Data is stored locally on the mobile device and in the cloud - (MongoDB). The API facilitates access to a MongoDB Atlas cloud service for online storage and retrieval using node express middleware.
4. Deploy - Cordova Platform provides
  - access to native hardware
  - access to platforms
  - project structure allowing deployment as a Hybrid App to mobile devices (i.e. Android smartphone).
5. Deploy the API server
  - We will look at using an online service to deploy our API server.
6. Business concepts and Current Practices investigated

## **Overview**

The concepts covered so far are somewhat universal and should reasonably support the various ideas you may have – research and problem solving will of course be required. You must develop and document enough to justify the time allocated to the project. Business and Research aspects of the project will be included.

As you see we will also cover deploying the API server to an online service for this project.

There may well be variations in your project to the requirements above. These will be accommodated within reason. Always consult us if unsure.

You should complete the work in several stages, developing new parts of your web application project in parallel with each assignment. The amount of work/time you spend on this about the same as the time spent doing assignment 1 and 2 combined.

What is expected is that to meet your concept requirements you will need extra functionality. This will be supported in the main by:

- Cordova Plugins
- Node Packages
- You own code

## **Group Project**

This is required – a group will be 3 students unless otherwise advised.

# Assessment Process

## initial proposal

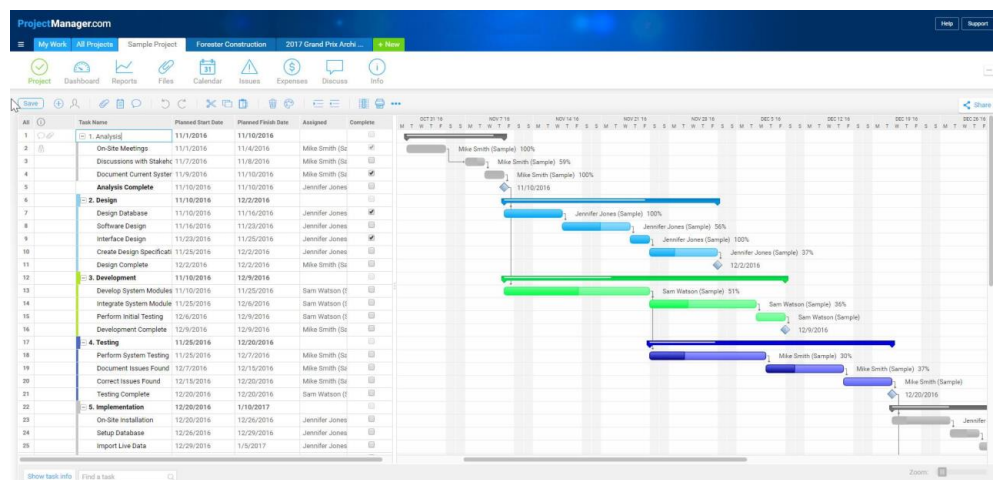
When the group is established you need to create an **initial proposal**:

Generate a **semi-original idea** for a mobile application. **Discuss your idea/s with the lecturer/tutors** assigned to help you with your study.

When the idea has been **developed** document and **submit via email to your Tutor for approval** the following **detail**:

- A brief description of what the app is and what it does.
- A brief discussion of the motivation for producing the app, i.e., who will use the app and why they will use the app (target audience).
- A summary of the major tasks to be completed in developing the app. Using a charting application may assist and is desired. At this stage (pre-approval) it is **expected to be basic** but would be improved over the life of the project.

This is an example and clearly shows the planning and who is doing what work. This is very valuable information.

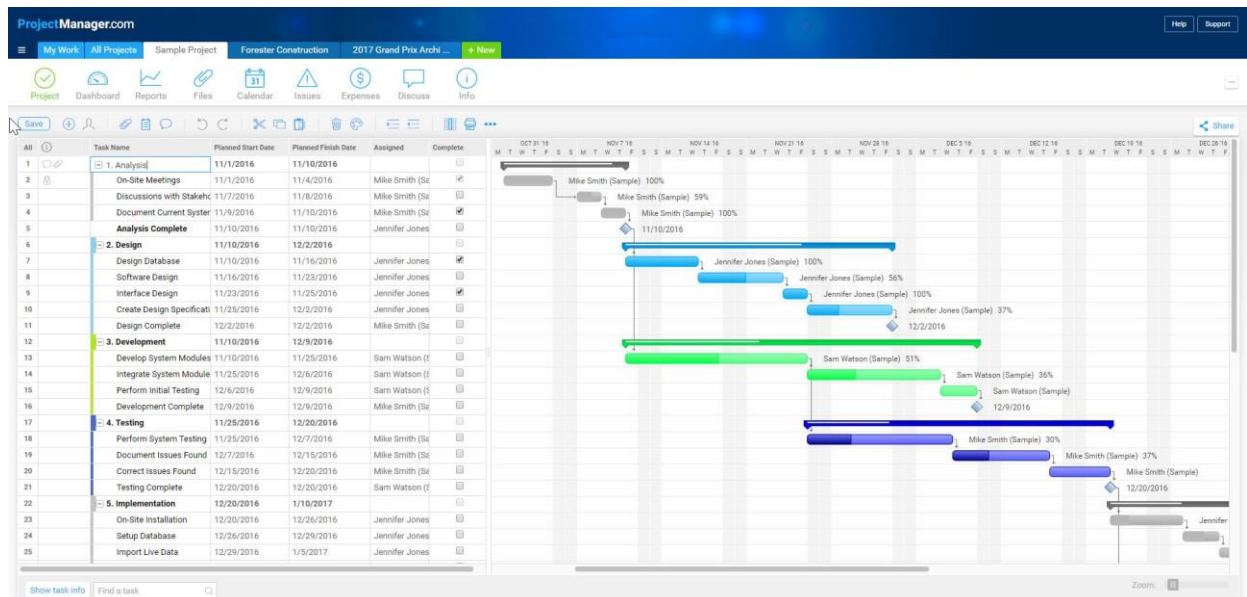


# App Design and Specification – Report Detail

## Proposal

### Completed Proposal

- A description of what the app is and what it does.
- A discussion of the motivation for producing the app, i.e., who will use the app and why they will use the app (target audience).
- A summary of the major tasks to be completed in developing the app (not complete). Using a **charting application** may assist and is desired. We want to know when things were done and who did them. This is very valuable information. Please also provide a simple tabular matrix on group members and % work done.



- A specification (UML or similar) for the major data structures used in developing the application.
- UI diagrams – show major interface concepts – drawn sketch/application generated

## Client App Development

### Comment

The app design and specification are to be used as the basis for the development of the project. Once again, the application should be developed using the same software as in Ass1 and 2.

**However, we do expect the use of additional Cordova Plugins and Node Packages, as necessary.**

Some important vectors in evaluating your App include:

- Functionality – does it work?
- Useability – is it comfortable/easy/intuitive to use?
- Utility – does it give me what I want?
- Quality –code (competent) – aesthetic (attractive) etc.

**Please see detail in Marksheet.**

### To include in this report:

In this section define the major functionality of your app and comment on your success **or otherwise**. Discuss and problems you may have had and how you addressed them.

## App testing, business case, marketing plan and research

### Testing

You must specify a **plan for testing your app**. **Include** the results found from testing your app in your documentation. You may need to research this – testing is a formal area; accordingly, you need to frame your response appropriately. (testing: Functional - UI - EndToEnd – Usability- Compatibility etc).

Here we are happy to see included results based on minimal use case(s) per strategy - time is tight.

### Business Plan

Document your business plan ( may require research). Include:

- Market demographics - how big you estimate you market is and you are they?
- Costings - Detail pricing\$/terms (subscription – buy outright etc ) (consider development costs, testing, marketing, maintenance and other costs for the year
- Estimate and document revenue and costs (including startup) over a period in tabular form - show the break-even point.
- Discuss how you will go about marketing your product.

- Also include a discussion on the market segment you have chosen. Research widely including app stores and the literature ( some relevant areas (e.g. security, cloud computing, location awareness, social impacts)).

## **Instructions**

Your document should detail User Instructions on how to run your app.

## Submission

You are required to submit your assignment electronically via the Moodle course website.

The deliverable is a compressed file containing all your assessment work.

Required:

- The folder containing all the files, folders and images required to test your application
- Your Word document

Please note that you should use your **student number** as **the name for your gzip, rar or zip file** when uploading to Moodle so that all students work can be linked back to the author.

## Referencing:

The Abridged Harvard Referencing Style Guide 2020 based on Style manual for authors, editors and printers (Commonwealth of Australia, 2002).

[https://sportal.cqu.edu.au/\\_data/assets/pdf\\_file/0018/107433/Harvard-Guide-2020.pdf](https://sportal.cqu.edu.au/_data/assets/pdf_file/0018/107433/Harvard-Guide-2020.pdf)

Assessment Task 3 - Mobile Apps Project Creative Project			
<b>Student Name</b>			
<b>Student Number</b>			
		<b>Mark</b>	<b>Given Mark/Brief Comments</b>

App design and specification – 10 Marks			
<b>Proposal</b> Well defined description of what the app is intended to be and do		<b>2</b>	
<b>Motivation</b> Well-reasoned choice of target audience and likely interest		<b>1</b>	
<b>Summary of tasks</b> A reasonable choice of tasks to be completed in producing the app is given (Gantt Chart)		<b>1</b>	
<b>Data</b> The major data/ data structures are documented		<b>2</b>	
<b>User interface prototypes</b> Prototypes for the main user interfaces/pages in the app presented		<b>2</b>	
<b>Originality/Creativity</b>		<b>2</b>	
<b>Sub Total</b>		<b>10</b>	



App development – 25 Marks			
<b>Client</b> <ul style="list-style-type: none"> <li>• Correct Framework</li> <li>• Correct support files – local implementation</li> </ul> <b>HTML - UI</b> <ul style="list-style-type: none"> <li>• Design - Items are appropriately formatted</li> <li>• Navigation – as required</li> </ul> <b>JavaScript - Functionality</b> <ul style="list-style-type: none"> <li>• Events correctly handled</li> <li>• Uses jQuery Mobile Plugins</li> <li>• Button Actions function to support Specification requirements</li> </ul>		9	
<b>Server</b> <b>Node/Express web server</b> <ul style="list-style-type: none"> <li>• Web Server setup correctly <ul style="list-style-type: none"> <li>○ Includes</li> <li>○ Middleware</li> <li>○ Routes</li> </ul> </li> <li>• Connects with online database</li> <li>• Appropriate/ functioning API</li> </ul>		9	
<b>Cordova Framework</b> <ul style="list-style-type: none"> <li>• Correctly implemented</li> <li>• Application runs in Android Studio / CLI</li> </ul> Deploys to both emulator and smart device		2	
<b>Deploy API Server</b> to online Service		2	
<b>Results</b> <ul style="list-style-type: none"> <li>• Achievement compared to others</li> <li>• Discussion of functionality and outcomes</li> </ul>		3	
<b>Sub total</b>		<b>25</b>	

App testing, business case, marketing plan and research - 15 marks			
<b>App Testing</b> App testing plan, documentation of tests		2	
<b>Business plan</b> Estimating costs, estimating revenue, break-even sales		4	
<b>Marketing</b> Demographic identification and description of tactics		4	
<b>Research</b> Documentation of products and issues		5	
<b>Penalties</b>			
<b>Sub total</b>		15	
<b>TOTAL</b>		50	

**Marker Comments**

**Markers Signature**

**Date:**