## Criterion A: Planning

### The scenario

The client and adviser, Mr Sunil Tewari, is the owner and CEO of Mansa Construction Pty Ltd, a construction company that operates in Sydney, New South Wales (a state of Australia).

As a part of construction within the state of New South Wales, every contractor working on a building site has to have appropriate and up-to-date certification to work. Otherwise, the company that is hiring the contractor has to pay the contractor’s business and income taxes. This has substantial implications on the owner of the company, my client, Mr Sunil Tewari, as he would have to pay out hundreds of contractor’s taxes every year.

Currently, there is no easy way to check whether a particular contractor has appropriate and up-to-date certification to work. Mr Sunil Tewari came to me to develop a solution that would allow him to check each of the contractors that he hires on a site-by-site basis, as well as a simple to-do-list function that would allow him to note down any other items related to getting contractor’s certification up-to-date and other things related to building projects.

An interview is below, where Mr Sunil Tewari talks about his needs for the program.

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### Rationale for proposed solution

The proposed solution would be a website with a Java backend to solve Mr Sunil Tewari’s problem. The program would allow the user to create and save new housing projects, each with a section that appropriate contractors can be listed, saved and checked for proper certification. Certification checking can be completed through the appropriate NSW Trades APIs. The program would also allow for a simple to-do list functionality, which would allow the client to note down anything that is to be done with regard to certification or the building project in general. This information would then be backed to the cloud for access on any platform.

The reasons I have chosen the aforementioned technologies are:

* *Platform independence* - This is very important to my client, as he often has to check certification away from his main computer. A website functional on both a phone and laptop would ensure this workflow could be possible
* *Aesthetic and ingenuity in GUI* - By using a website, languages such as CSS and React.js can be used to develop a GUI that is aesthetically pleasing and functional, while still being user-friendly
* *Data safety* - By using a website, the client could create a project on their main computer and save it to the cloud. This would allow the client to access their important information if there is a hardware failure/breakage, as happens often on building sites.
* *Personal knowledge* - I have previous experience with JavaScript, HTML, CSS and Java, so development will be easier

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### Success criteria

The success criteria (that are evaluated in criterion E) should be listed in the form of bullet points. If the student is the client, they must have an advisor who can review the success criteria and provide the validation of the product.

### Appendix