Rationale for Technology Choices

Use formal rationale arguments (see CITS4401) to document your decisions. This document is your insurance.

This can be a template that we use when deciding what to use, and we put it in our meetings.

A rationale argument contains:

* The **issues** that were addressed
  + What is the problem we’re trying to solve? Eg. How are we going to share this with the client?
* The **criteria** used to guide decisions and
  + How are you going to decide whether it’s the right decision or not?
  + Time – how long will it take to use A or B
  + Skill – do we already know how to use it?
  + Security – how secure does this really need to be? (authentication etc)
* The **alternative proposals** which were considered
* The **arguments** developers when through to reach a decision
* The **decisions** made for resolution of the issues

# Template

|  |  |
| --- | --- |
| **Issue /problem**  We’re trying to solve |  |
| **Criteria**  Used to guide decisions |  |
| **Alternative proposals**  Which were considered |  |
| **Arguments**  Developers went through to reach a decision |  |
| **Decisions**  Made for resolution of the issues |  |

# Mockups

|  |  |
| --- | --- |
| **Issue /problem**  We’re trying to solve | How to agree as a team exactly what the product and its features will look like  How to show the client what we are going to deliver |
| **Criteria**  Used to guide decisions | Quick to create and update  Interactive  Allows comments |
| **Alternative proposals**  Which were considered | Draw.io  Adobe XD  Slideshow apps like Powerpoint / Slides |
| **Arguments**  Developers went through to reach a decision | What is the fastest to use? (draw.io and adobe xd)  Does it need to be usable by everybody? (no)  Can anybody update the mockups? (no) |
| **Decisions**  Made for resolution of the issues | One person will be solely responsible for creating mockups - the person who is most comfortable with the chosen software (adobe xd) |

# Database / Backend

|  |  |
| --- | --- |
| **Issue /problem**  We’re trying to solve | Which database to use |
| **Criteria**  Used to guide decisions | Free, easy to use, easy to install locally, easy to deploy  Well documented.  A document database (not relational) |
| **Alternative proposals**  Which were considered | DynamoDB, MongoDB |
| **Arguments**  Developers went through to reach a decision | Which can we get going straight away? MongoDB  Which has great documentation? Both  Which is easier to administrate? MongoDB  Does one make it easier to support an API endpoint? MongoDB |
| **Decisions**  Made for resolution of the issues | MongoDB Atlas set up in minutes, and provides a ready-made user interface to interact with the database  Can we do this without a database? No, the client would like the courses to be saved somewhere |

# Front End Languages

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| --- | --- |
| **Issue /problem**  We’re trying to solve | Which language would best suit the capabilities required? (mainly drag drop) |
| **Criteria**  Used to guide decisions | Well documented, many online tutorials similar to what we want to achieve  Easy to install on any platform (windows, osx ,linux)  Easy to deploy |
| **Alternative proposals**  Which were considered | Python with flask and additional packages to allow for drag and drop  NodeJS with React |
| **Arguments**  Developers went through to reach a decision | Is there one that is better suited for the functionality we need?  Is the learning curve great on React?  Is there anybody in the team who is already proficient in using either library that supports our needs? |
| **Decisions**  Made for resolution of the issues | React comes with all the functionality we need  NodeJS is familiar to all of us, since we have worked with Javascript  Though we are all more familiar with Python, |