Potential Solution Architecture

# **Introduction**

The system is to be developed using the Scaled Agile Framework with 3 different groups

working simultaneously on the project. Give an overview of the various architectures that might be used in development of your software. You can refer to [this book](https://www.oreilly.com/library/view/software-architecture-patterns/9781491971437/) on different software-architecture patterns to help you make your decision. [~100-250 words]

# **Potential Architectures**

## Potential Architecture 1: <Name of chosen architecture>

Overview of architecture in more detail, why was this architecture chosen? [~100-250 words]

### Advantages and disadvantages

| **Property** | **Advantage** | **Disadvantage** |
| --- | --- | --- |
| Usage of API ... | Dont need to know details of ... | APIs are ... |
|  |  |  |

### Risks

What are the main risks your project may face if there is an issue with the architecture?

List them and discuss each of the risks:

1. Risk event 1: Modules are tightly coupled, and if there are changes to a module, the entire architecture will need to adjust to accommodate the change
2. Risk event 2: etc...

| **Risk Event** | **Probability** | **Impact** | **Risk Response** |
| --- | --- | --- | --- |
| Risk event 1 | 60% | Low | API should be clearly defined at the start of the development stage... |
| Risk event 2 | ... |  |  |

## Potential Architecture 2: <Name of chosen architecture>

Same as above for a different architecture

# 

# **Potential Languages and Frameworks**

## Potential Frontend Framework

| **Frontend Framework** | **Advantages** | **Disadvantages** |
| --- | --- | --- |
| ReactJS | • Able to reuse react  components  • Open source  ... | • Requires external libraries  • Poor documentation  • Mixing HTML into JS.  ... |
| ... | ... |  |

## Potential Backend Framework

### Python Framework:

| **Python Backend Framework** | **Advantages** | **Disadvantages** |
| --- | --- | --- |
| Flask | • ...  ... | •  ... |
| ... | ... |  |

### Javascript Framework:

| **Javascript Backend Framework** | **Advantages** | **Disadvantages** |
| --- | --- | --- |
| ExpressJS | • ...  ... | •  ... |
| Sails.js | ... |  |

# **Conclusions**

## Recommended Architecture Model

Describe which model / hybrid of models will be used and why [~100-250 words]

## Recommended Languages

Describe which languages will be used and why for the various groups in the table

| **Group** | **Task** | **Language** |
| --- | --- | --- |
| Group 1 | Backend for .. | Python |
| Group 1 | ... |  |
| Group 3 | Frontend | ... |