COS30041 Creating Secure and Scalable Software

**Software Proposal for Distinction (D)**

**Prepared by: <Your name, student id>**

**Intended Grade: <D or HD> [In case of HD, your tutor will take into your HD Research proposal for consideration as one big project to judge your HD proposal]**

**Submission for Feedback (Week 6 – 7) and Final Approval (Week 8, Fri, 5:00pm)**

**[Note: Based on past experience, it will take at least 2 to 3 submissions to make it right. So, start early]**

**Instructions** - This document is for students aiming to achieve Distinction (D) or above.

For **D** **grade**, a student needs to do a software application that can demonstrate their skills in developing enterprise application using **a variety of technologies discussed in this subject**. In judging whether your application will be approved or not, the lecturer will be looking into whether the student can utilize various technologies (e.g. as a guide 70%+ of those discussed in the subject) in the application.

For **HD grade**, a student needs to complete the software for D grade as well as a research report. For detailed requirements of the research report, please see the HD\_Research\_Proposal\_Template document in 81\_HD\_Task\_5.4.

**Intended Learning Outcomes (extracted from Unit Outline)**

1. Build and deploy secure and scalable application using contemporary frameworks

2. Explain and apply strategies, patterns and frameworks to address a range of scalability issues

3. Explain and apply strategies, patterns and frameworks to address a range of security issues

4. Use contemporary tools to evaluate the scalability and security of applications

**SOFTWARE PROPOSAL for Distinction**

**Software Title: <Your Software>**

**Introduction**

<A brief introduction to the secure and scalable software application that you want to develop>

**Business Scenario**

<**A description of the business scenario** that requires you to develop the secure and scalable software application. You need to provide enough context to justify the functionalities of the software to be listed in the Functionality section>

**Functionalities that you want to implement**

Below is a list of functionalities for the software:

1. <Describe an input-to-output function of your software> [be specific, “Add Record” will be rejected. I need to know what “record” you are adding (e.g. add a new user and add a new product)
2. <Describe another input-to-output function / feature of your software >
3. <…>
4. <…>
5. <…>

**Functionality and Technology Traceability Matrix**

The following table shows the relevant technologies discussed in this subject that could be used to implement the functionalities as suggested in the Functionalities section above. If you plan to use some other technologies that has not been discussed in the subject, please specify.

At this stage, just the nature of individual software component is enough. There is no need to do “design” on the software component level (e.g. the names and responsibilities of the classes, and how these classes interact with each other). Having said that, it is nice to have but not necessary.

|  |  |
| --- | --- |
| Functionality | Related technologies (discussed in this subject + others, please specify) <<e.g. Data Tier – Entity Class using ORM [no JDBC – too old☺]; Business Tier – EJB (Stateless, Stateful, Singleton), JavaMail API; Web Tier – JSF, Managed Beans, AJAX, JSON; Others – PrimeFaces [on top of JSF]; use of JSON for Web Services [instead of using DTO for communication between servers]>> |
| F1 | <a brief description of how you would utilize the related technologies discussed in this subject to implement the required functionality> |
| F2 |  |
| F3 |  |
| F4 |  |
| F5 |  |
| <create more | rows if needed> |