



## **COS30041 Creating Secure and Scalable Software**

### **Software Proposal for Distinction (D)**

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**Intended Grade: 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: Ragib Televisions (website)

#### Introduction

I am planning on developing a web application where people find out information about different TVs available and can directly purchase them. Furthermore I wish to let 1 authorised user (i.e. manager/ admin account) access all these information in full details, all purchase by certain person or all purchases of single product type (depending on his option of choice).

#### Business Scenario

A new Television Company plans on having a net outlet for their business in order to let customers order their goods online, instead of walking all the way to their store. Thus they want their customer to see all the TVs they have (alongside their accessories) and also some general information about themselves and the TVs they sell. Furthermore, they also wish to have a secure access to the system in order to obtain the list of customers, products sold and the dates they were sold at and also wish to have the feature like select specific customer to see their choices and products sold to note their popularity.

#### Functionalities that you want to implement

Below is a list of functionalities for the software:

- F1. Create myCustomer Table in database to collect, store and obtain the sale's information and their relevant logic
- F2. Create myCustomer Entity Class as DAL (map to database table) and their relevant logic
- F3. Create myCustomerFacadeClass in the BLL and their relevant logic
- F4. Create myCustomerDTO and myCustomerFacadeRemote Class (RI) and their relevant logic
- F5. Create the myCustomerManagedBean class and their relevant logic
- F6. Build websites for Home, Products, Owner Details webpages which will have information regarding general company, product details and owner details
- F7. Build websites for Enquiry, Payment which will be used to collect all customer details (like first name, last name, email, street address, suburb, state, postcode, phone number, preferred contact, price, extra feature, quantity of product, comment, credit card details, name on credit card, card number, card expiry date, CVV number)
- F8. Build websites for manager for login, manager menu (where all options to view the data full, view data from certain customer, view certain product sell data) , websites for "view full data", "view all sales data for specific customer" "view all sales for specific product " and also websites to find "specific customer" and "specific product"
- F9. Use glassfish's fileRealm and Sha encryption for the admin or manager account

### 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	<b>Related technologies discussed in this subject (i.e. Java EE) + others, please specify.</b> <<i.e. specify technologies used in each tire >>
F1	JavaEE and table Database tier
F2	JavaEE and entity class in DAL tier
F3	JavaEE and BLL tier
F4	JavaEE and DTO and RI tier
F5	JavaEE and ManagedBean
F6	JavaEE and web browser (like firefox)
F7	JavaEE and web browser (like firefox)
F8	JavaEE and web browser (like firefox)
F9	JavaEE and File Realm in glassfish and SHA encryption