**GRADUATE CERTIFICATE: Intelligent Reasoning Systems (IRS)**

**PRACTICE MODULE: Project Proposal**

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| **Date of the proposal:**  19 July 2021 |
| **Project Title:**  ISS Project – Sirimiri Auto Claim System (chatbot name: Sirimiri) |
| **Sponsor/Client:** *(Name, Address, Telephone No. and Contact Name)*  Sirimiri Private Limited is a newly established international Food & Beverages Services company based in Singapore. The company aims to bring the best quality food across the globe to Singaporeans. The company's employees are constantly travelling to different countries to source the best quality food products. |
| **Background/Aims/Objectives:**  The solution proposed by Yudao and Engkoon is a chatbot build on the most popular instant message platform, i.e. Whatsapp. First, the chatbot can retrieve employee information through conversation using Dialogflow, a natural language understanding platform. Then, validate the claim amount using built-in OCR capabilities. Finally, the chatbot will auto-approve or reject a claim based on a user-defined rule-based system created using jBPM, an open-source workflow engine written in Java that can execute business processes. All the setups are then deployed on Amazon Elastic Compute Cloud to allow the employee to claim their expenses anytime in the day. |
| **Requirements Overview:**   * A single platform where communication between the employee and finance team is done. * Optical character recognition (OCR) capabilities to auto-detect total claim amount. * Frequently Asked Questions (FAQs) to help answer simple queries. * A rule-based system to automate the claim expenses process * System to deploy 24/7 to help team members any time of the day. |
| **Resource Requirements (please list Hardware, Software and any other resources)**   * Reasoning systems: KIE jBPM * Pertained machine learning models: NLP * Chat-bots: Dialogflow, Twilio, Whatsapp * Cloud computing/server: Amazon EC 2, GoogleCloud |
| **Number of Learner Interns required: (Please specify their tasks if possible)**  2 team members  Yudao: Chatbot Design  Eng Koon: jBPM |
| **Methods and Standards:**   |  |  |  | | --- | --- | --- | | **Procedures** | **Objective** | **Key Activities** | | | **Requirement Gathering and Analysis** | The team would meet with Sirimiri Private Limited to scope the details of the project and business objectives. | Gather & Analyze Requirements  Establish Functional Baseline | | **Technical Construction** | To develop the source code in accordance with the design. | Setup Development Environment  Understand the System Context, Design  Perform Coding | | **Integration Testing and Acceptance Testing** | To ensure interface compatibility and confirm that the integrated system software meets requirements and is ready for acceptance testing. | Conduct System Integration Testing  Evaluate Testing  Establish Product Baseline | | **Acceptance Testing** | To obtain Sirimiri Private Limited user acceptance that the system meets the requirements. | Plan for Acceptance Testing  Conduct Training for Acceptance Testing  Obtain Customer Acceptance Sign-off | | **Delivery** | To deploy the system into the production environment. | Production (Sirimiri Private Limited standalone server) support and troubleshooting process is defined. | |

**Team Formation & Registration**

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| Team Name: |
| Project Title (repeated):  ISS Project – Sirimiri Auto Claim System (chatbot name: Sirimiri) |
| System Name (if decided):  Sirimiri Auto Claim System |
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| Team Member 1 Name:  He Yudao |
| Team Member 1 Matriculation Number:  S9173308J |
| Team Member 1 Contact (Mobile/Email):  heyudao@hotmail.com |
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| Team Member 2 Name:  Lee Eng Koon |
| Team Member 2 Matriculation Number: |
| Team Member 2 Contact (Mobile/Email):  leeengkoon@gmail.com |

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| **For ISS Use Only** | | |
| **Programme Name:** | **Project No:** | **Learner Batch:** |
| **Accepted/Rejected/KIV:** | | |
| **Learners Assigned:** | | |
| **Advisor Assigned:**  Contact: Mr. GU ZHAN / Lecturer & Consultant  Telephone No.: 65-6516 8021  Email: [zhan.gu@nus.edu.sg](mailto:zhan.gu@nus.edu.sg) | | |