**GRADUATE CERTIFICATE: Intelligent Software Agents (IRS)**

**PRACTICE MODULE: Project Proposal**

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| **Date of proposal:**  09 Jan 2021 |
| **Project Title:**  ISS Project – Name Recorder Automation, for automating audio file optimization by removing noise, normalization and detecting/adjusting/truncating silence |
| **Sponsor/Client:** *(Name, Address, Telephone No. and Contact Name)*  Institute of Systems Science (ISS) at 25 Heng Mui Keng Terrace, Singapore  NATIONAL UNIVERSITY OF SINGAPORE (NUS)  Contact: Mr. GU ZHAN / Lecturer & Consultant  Telephone No.: 65-6516 8021  Email: [zhan.gu@nus.edu.sg](mailto:zhan.gu@nus.edu.sg) |
| **Background/Aims/Objectives:**  Republic Polytechnic (RP) deploys a name reader system for graduation ceremonies every year that makes use of pre-recorded student names that will be played as the students go up on stage to receive their diploma certificates.  The reason for using pre-recorded audio is because when a person is reading hundreds of names live, it is very stressful on the reader to pronounce the name right each time. Mispronouncing the student’s name is embarrassing for both the student and the school.  The recording process involves a voice talent who will read and record the names, and an audio technician who post-edits the recordings. This is a very repetitive and error-prone process, with each name taking on average 6 seconds to record, and 60 seconds to post-process. Multiplied by the number of students graduating each year, around 90 man-hours are spent by RP staff on this process. This makes it an excellent candidate for process automation. |
| **Requirements Overview:**   * Research ability * Programming ability * System integration ability |
| **Resource Requirements (please list Hardware, Software and any other resources)**  Hardware proposed for consideration:   * Normal laptop with built-in microphone and speaker, etc.   Software proposed for consideration:   * Python Runtime Environment with several libraries. |
| **Number of Learner Interns required: (Please specify their tasks if possible)**  Two team members  Vincent Ng – Project team leader, involve project planning, design, system integration and presentation  Zhou Zhe – Project team member, involve project analysis, implementation and documentation of project report and user guide. |
| **Methods and Standards:**   |  |  |  | | --- | --- | --- | | **Procedures** | **Objective** | **Key Activities** | | | **Requirement Gathering and Analysis** | The team should meet with ISS to scope the details of project and ensure the achievement of business objectives. | 1.        Gather & Analyze Requirements | | 2.        Define internal and External Design | | 3.        Prioritize & Consolidate Requirements | | 4.        Establish Functional Baseline | | **Technical Construction** | ·         To develop the source code in accordance to the design. | 1.        Setup Development Environment | | ·         To perform unit testing to ensure the quality before the components are integrated as a whole project | 2.        Understand the System Context, Design | | 3.        Perform Coding | | 4.        Conduct Unit Testing | | **Integration Testing and acceptance testing** | To ensure interface compatibility and confirm that the integrated system hardware and system software meets requirements and is ready for acceptance testing. | 1.        Prepare System Test Specifications | | 2.        Prepare for Test Execution | | 3.        Conduct System Integration Testing | | 4.        Evaluate Testing | | 5.        Establish Product Baseline | |  | | **Acceptance Testing** | To obtain ISS user acceptance that the system meets the requirements. | 1.        Plan for Acceptance Testing | | 2.        Conduct Training for Acceptance Testing | | 3.        Prepare for Acceptance Test Execution | | 4.        ISS Evaluate Testing | | 5.        Obtain Customer Acceptance Sign-off | |  | | **Delivery** | To deploy the system into production (ISS standalone server) environment. | 1.        Software must be packed by following ISS’s standard | | 2.        Deployment guideline must be provided in ISS production (ISS standalone server) format | | 3.        Production (ISS standalone server) support and troubleshooting process must be defined. | |  | |

**Team Formation & Registration**

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| Team Name:  NRA |
| Project Title (repeated):  Name Recorder Automation |
| System Name (if decided):  Name Recorder Automation |
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| Team Member 1 Name:  Ng Ziming Vincent |
| Team Member 1 Matriculation Number:  A0213488Y |
| Team Member 1 Contact (Mobile/Email):  e0508589@u.nus.edu |
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| Team Member 2 Name:  Zhou Zhe |
| Team Member 2 Matriculation Number:  A0213542R |
| Team Member 2 Contact (Mobile/Email):  zhouzhe@u.nus.edu |
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| Team Member 3 Name:  NA |
| Team Member 3 Matriculation Number:  NA |
| Team Member 3 Contact (Mobile/Email):  NA |
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| Team Member 4 Name:  NA |
| Team Member 4 Matriculation Number:  NA |
| Team Member 4 Contact (Mobile/Email):  NA |
|  |
| Team Member 5 Name:  NA |
| Team Member 5 Matriculation Number:  NA |
| Team Member 5 Contact (Mobile/Email):  NA |
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| Team Member 6 Name:  NA |
| Team Member 6 Matriculation Number:  NA |
| Team Member 6 Contact (Mobile/Email):  NA |
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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) | | |