GRADUATE CERTIFICATE: Intelligent Software Agents (ISA)
PRACTICE MODULE: Project Proposal

Date of proposal:

27 Feb 2021

Project Title:

Price Scrape - A Web Scraping Tool for Sg Grocery Stores

Sponsor/Client: *(Name, Address, Telephone No. and Contact Name)*

Institute of Systems Science (ISS)
25 Heng Mui Keng Terrace, Singapore
NATIONAL UNIVERSITY OF SINGAPORE (NUS)

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Background/Aims/Objectives:

Background:
Digital transformation has accelerated by COVID-19. Retail and supermarket trades have significantly grown. Consumers and employees are required to monitor the items' price fluctuations more frequently to get the best deals and remain competitive.

Aims:
Apply techniques / knowledge & skills that would be learnt from IPA / SRBP / RISM to create an intelligent web scraping tool to perform price scraping.

Objectives:
The tool will free up manual scraping time of consumers and employees allowing them to spend these saved times on more meaningful work. The tool should be able to run both attended and unattended mode with minimal disruptions to the human user.

Requirements Overview:

- Research ability
- Programming ability
- System Design ability

Resource Requirements (please list Hardware, Software and any other resources)

Hardware proposed for consideration:

- Target to work with minimal hardware requirements (e.g. to work on normal student laptop with just integrated graphic cards and internet connection)

Software proposed for consideration:

- Probably python-based
- Robotic Process Automation e.g. TagUI / UiPath
- NLP lexical/sentiment analysis e.g. nltk / tensorflow
- Scheduler e.g. Windows scheduler / scheduler package
- User Interface e.g. tkinter
- Web scraping tool, hence no standalone

Number of Learner Interns required: (Please specify their tasks if possible)

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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. · To perform unit testing to ensure the quality before the components are integrated as a whole project	1. Setup Development Environment 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 Name: Price Scrape
Project Title (repeated): Price Scrape
System Name (if decided): -
Team Member 1 Name: Lim Kah Ghi
Team Member 1 Matriculation Number: A0100172A
Team Member 1 Contact (Mobile/Email): 8368 9082 / E0508022@u.nus.edu
Team Member 2 Name: Chng Yan Hao
Team Member 2 Matriculation Number: A0024023A
Team Member 2 Contact (Mobile/Email): 9366 6039 / E0529228@u.nus.edu
Team Member 3 Name: -
Team Member 3 Matriculation Number: -
Team Member 3 Contact (Mobile/Email): -

Team Member 4 Name: -
Team Member 4 Matriculation Number: -
Team Member 4 Contact (Mobile/Email): -
Team Member 5 Name: -
Team Member 5 Matriculation Number: -
Team Member 5 Contact (Mobile/Email): -
Team Member 6 Name: -
Team Member 6 Matriculation Number: -
Team Member 6 Contact (Mobile/Email): -

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		