

Problem Statement

Problem 1: Time consuming for certain manual check process

Admin staff would need to ensure pricing of different categories of products are correctly keyed and verified.

Problem 2: Manual forwarded selection process

Selecting an forwarder, with the consideration of many factors like freight days, port of calls, service vs price manually is not optimal

Solution 1: Python

A python script was proposed to run through the sales order and to automatically generate the necessary checking output. This will reduce the admin personnel needed for manual checking. As shown below, our code will allow us to have a column which states “success” or “unsuccess”. This would allow admin personnel to focus only on the “unsuccess” entries.

8	20001	53	5	Restaurant A pte ltd	Trade	Spirits	Success
8	20002	38	5	Restaurant A pte ltd	Trade	Spirits	Success
8	20003	50	5	Restaurant A pte ltd	Trade	Spirits	Unsuccess

Solution 2: Excel solver

Goal Programming and Excel solver was proposed to select an optimal forwarder by considering Cost, Estimated Time of arrival and Service. Excel should also be able to generate summary reports of the selection processes, as shown below.

Forwarder Analysis Report

Forwarders' Name	Cost SGD	Service /5 Star
3rd alpha	2302	4
2nd beta	2000	3
1st charlie	2100	5

Quick Analysis Results

Forwarder	1st	2nd	3rd
Score	96	92	86
Cost (nearest 50s')	+100	\$2000	+300
Time	+2	+5	35 day
Service	5	3	4

Forwarder Analysis Report

Date: 10/11/2021
User: Adam



1st
hotel
Cost: 1800
ETA: 25
Service 4
Score: 100

2nd
tango
Cost: 2000
ETA: 30
Service 3
Score: 85

3rd
papa
Cost: 1857
ETA: 40
Service 2
Score: 78

