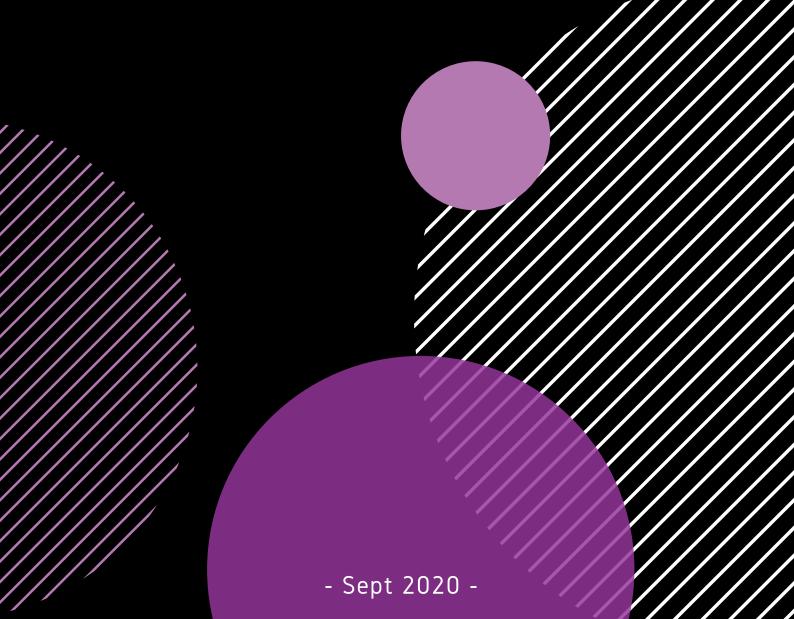# USER GUIDE

EMPLOYEE TASK SCHEDULING PROGRAM

Developed by Steven Kyle Villanueva

Introduction

A task assignment modelling project was assigned to the developer in order to randomly designate work to interns while also prioritizing diversity and certain conditions. Some tasks may be repeated over a certain period of time. Some cannot be assigned to the same intern. The number interns, timeline duration and criteria should be dynamic and flexible depending on different situations.

The developer used Python in order to automate the model. Hopefully, this program will help coordinators in distributing and scheduling tasks of their employees in a random manner.

Contact Information

For more information about the developer or the program, feel free to contact him on the following:

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Program Setup

Before running the program, install the latest version of Python software on the unit. Also, make sure all packages and libraries that will be used by the program are installed as well. These are random, csv, and pandas. For ease of access, both executable file and python code are made available.

Program Definitions

The program will mainly run on three components namely employees, time period and tasks. The number of employees are dynamic and their names can be modified. The time period is fixed to be shown as monthly intervals. However, the time period can be adjusted as well. Lastly, the tasks that will be assigned are restrained based on the employees' vacancy on their first month. The name of the task can be changed. The number of employees working on a specific task and the timeline until it can be assigned again to the same employee can be edited.

Program Procedure

Initially, the program will be asking for an initial number of employees and overall time period. It will also provide the user the opportunity to name the employees. Then, the main menu will be displayed, including the initial schedule based on the inputs. Option [1] will remove all assigned tasks on the schedule. Option [2] will add a new employee on the schedule. Renaming the employee will be prompted as well. Option [3] will add a new month.

Option [4] will add a new task to the schedule. First, the task name will be asked. Second, the maximum number of employees allowed working on the task simultaneously will be requested. Third, the program will check if the task can be assigned again on an employee. If yes, it will ask for the task's rest period or the amount of time (in months) before an employee can be assigned again. Finally, the program will proceed in completing the schedule by randomly assigning tasks to employees based on the inputs provided.

Option [5] will remove an employee on the schedule. Option [6] will save the current

schedule on a csv file named schedule.csv. Option [7] will load an existing previous schedule from a schedule.csv file. Option [9] will close the program.

Program Limitations

An employee cannot multi-task. Only one schedule can be saved in the program. The program cannot assign more tasks if all employees are unavailable on the first month. The schedule printing may not be aligned on the program itself. Viewing the csv file is more appropriate for larger schedules and lengthy task names. The month names are fixed.

SAMPLE RUNS

```
-------------Employee Task Schedule-------------
Sched     month1    month2    month3    month4    month5
emp1      text      email     call      text      email
emp2      email     text      email     call      text
emp3      text      call      text      email     text
emp4      email     text      email     text      email
emp5      call      email     text      email     call
-------------------------------------------------------
```

A marketing department schedule on tapping their clients with all tasks having at least a one-month rest period.

```
-------------Employee Task Schedule-------------
Sched     month1    month2    month3    month4    month5
adam      sec       fin       hr        mkt       ops
ben       hr        sec       fin       ops       mkt
carl      fin       mkt       sec       hr        ops
dan       mkt       hr        ops       fin       sec
eli       ops       fin       mkt       sec       hr
-------------------------------------------------------
```

An exploratory program of a company providing their interns sufficient knowledge from different departments namely: secretariat, finance, marketing, operations, and human resources