The Turn Manager

Overview.

Turn Manager is a program written in Google Sheets to fairly distribute unpleasant, difficult or highly lucrative tasks among the members of a team.

The program achieves relatively fair task distribution by ensuring that on average, each team member performs an equal number of tasks. It does this by calculating the total number of tasks performed by each team member and highlights the names of "active" team members, who have the lowest number of tasks.

The program is scalable and could technically incorporate any team size, but is best suited for teams under 50 people. It has been designed to be simple to use and update, requiring only basic spreadsheet knowledge.

The only technical requirement for running this program is an individual Gmail account for each user. The program may be accessed via the link below (it will ask you to create a local copy for your own use):

https://docs.google.com/spreadsheets/d/1ka-NTR5IeZt1aPj6rZ8IksLcsNQIdq4SfeMi3s443-c/copy

Possible Applications.

The program can be used in a variety of workflow scenarios, so long as the following criteria are met:

- There is a small to medium sized team within the workforce, whose members share the same job scope.

- There is a particular type of task within the job scope, which is significantly easier/harder or is more pleasant/unpleasant that the rest.

- The number of such tasks fluctuates greatly, with some periods having a very higher number of tasks, while other periods have barely any.

Here are some real life applications of this system:

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Hotel front desk staff have many responsibilities, one of which is offering assistance to guests who use the hotel library, which has several book cases, desktop computers and a printer.

Staff are only called to the library when there is a need for IT troubleshooting or when a guest complains about not finding a book they have read before. These tasks are much more difficult than the usual front desk activities and involve a greater likelihood of facing angry guests. Hence, the staff would like this hard duty shared fairly among themselves.

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A shipyard specializing in ship repair employs a team of engineers, who work on solving a variety of structural and mechanical problems. One of their responsibilities is to survey incoming ships for damages and carefully document every issue they have identified.

This is a very tedious and time consuming assignment, which the engineers would happily trade for a number of other more engaging duties. Hence, they wish such assignments to be distributed fairly among all team members.

Description.

The program consists of 4 spreadsheet: "Turn Manager", "Record", "Archive" and "Technical". The first two spreadsheets are used to respectively determine the next person in line for a task and to assign the task to the person. "Archive" is only used to occasionally reset the turn manager (more on that later). Finally, "Technical" is simply a page to store the dropdown menus.

In order to illustrate the work of the program, we will use an example of a single team, which is split across two cities in two time zones – Melaka in Malaysia and Seoul in South Korea.

Let take a look at the first sheet – "Turn Manager":

	A	B	C	D	E	F	G	
1	Turn Manager			Shift				
2				Melaka Time		Seoul Time		
3	Name	Round	Attendance	Start	End	Start	End	
4	Agnes	3	Working	07:00	16:00	08:00	17:00	
5	Billy	3	Working	08:00	17:00	09:00	18:00	
6	Chengjie	2	Not Working	10:00	19:00	11:00	20:00	
7	Eduardo	2	Working	07:00	16:00	08:00	17:00	
8	Fumiko	0	MC	12:30	21:30	13:30	22:30	
9	Jane	1	On Leave	13:30	22:30	14:30	23:30	
10	Lydia	2	Working	14:30	23:30	15:30	00:30	
11	Marhani	2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
12	Shahdan	1	Not Working	07:00	16:00	08:00	17:00	
13								

- The first column has a list of names of team members from both locations, arranged in an alphabetical order.

- Second column displays the round of each team member, which goes up by 1 each time they are assigned a task.

- Third column is the current attendance status of the team member.

- Lastly, you can see the work shift of each team member, shown in two time zones for the sake of convenience.

Turn manager automatically highlights the names of each team member who has the lowest round, among those who are currently "Working". As you can see, Fumiko has the lowest round ("0"), but is on "MC", so the turn manager ignores her. The next lowest round is "1", but both Jane and Shahdan are absent, so they are ignored as well.

Hence, the system highlights Eduardo and Lydia, who are present and round 2. When more than 1 name is highlighted, the top most name is selected.

In order to work properly, the "Turn Manager" spreadsheet does require the Team Leader or a designated team member to update the Attendance and Shift timing of each member. Both can be done via dropdown menus, with shift timings calculated automatically.

This setup allows for some ease of life rules to be implemented, such as "No task is to be assigned to an team member in the last hour of his shift" or, as is the case with Marhani, to someone who will be resigning soon.

If a team member resigns, his row should be deleted. To add a new team member, add a blank row to where his name should appear on the list, copy the row of any other team member and paste it on the blank row. Then, simply change the name to that of the new member. Below, is an example of a new team member "George".

	A	B	C	D	E	F	G	
	Turn Manager			Shift				
				Melaka Time		Seoul Time		
	Name	Round	Attendance	Start	End	Start	End	
Agnes		3	Working	07:00	16:00	08:00	17:00	
Billy		3	Working	08:00	17:00	09:00	18:00	
Chengjie		2	Not Working	10:00	19:00	11:00	20:00	
Eduardo		2	Working	07:00	16:00	08:00	17:00	
Fumiko		0	MC	12:30	21:30	13:30	22:30	
George		0	Working	13:30	22:30	14:30	23:30	
Jane		1	On Leave	13:30	22:30	14:30	23:30	
Lydia		2	Working	14:30	23:30	15:30	00:30	
Marhani		2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
Shahdan		1	Not Working	07:00	16:00	08:00	17:00	

If you scroll to the right, you will soon see the table below. It shows the backend formulas which make Turn Manager operate. Normally these 3 columns will be hidden, to prevent users accidentally changing the settings.

	J	K	L
	Name	Round	SUBTOTAL (MIN)
Agnes		3	0
Billy		3	0
Chengjie			0
Eduardo		2	0
Fumiko			0
Esther		0	0
Jane			0
Lydia		2	0
Marhani			0
Shahdan			0

Next, let us examine the "Record" sheet. This is where tasks are actually assigned to team members.

- The first column is a date stamp and is automatically filled in with the current time, as soon as an entry is made in "Assigned To" column.

- Second column, "Assigned By" shows the name of the person in charge of assigning the task. It is useful if team members take turns to manage this program and assign out tasks. If this activity is performed by single team lead, this column can be safely deleted.

- Third column, "Assigned To", shows the name of the person who will perform the task. Once a team members name is entered into this column, his/her rank in the Turn Manager will advance by 1.

	A	B	C	D	E	F	
1	Assigned On	Assigned By	Assigned To	Task ID	Validity	Solution ID	
2	2017-03-19 14:02	Chengjie	Eduardo	1234123	Valid	123	
3	2017-03-19 14:02	Fumiko	Billy	14345	Valid	53445	
4	2017-03-19 13:43	Chengjie	Agnes	124123	Valid		
5	2017-03-19 13:43	Agnes	Chengjie	213512	Valid	45645	
6	2016-08-28 20:15	Jane	Lydia	2151255	Valid	645645	
7	2016-08-28 20:15	Lydia	Jane	123512	Valid	46566	
8	2016-08-28 20:15	Billy	Shahdan	251253	Valid		
9	2017-03-19 14:00	Shahdan	Marhani	25123	Valid	465456	
10	2017-03-19 14:00	Eduardo	Agnes	125123	Valid	45646	
11	2017-03-19 13:42	Chengjie	Lydia	1235123	Valid	4564	
12	2017-03-19 13:58	Marhani	Agnes	121235	Valid	456456	
13	2017-03-19 13:42	Lydia	Chengjie	12351235	Valid	465	
14	2016-08-28 20:17	Agnes	Billy	7645745678	Valid	4456456	
15	2016-08-28 20:28	Billy	Jane	567456675	Invalid		No actual work done
16	2016-08-28 20:28	Chengjie	Marhani	564563457	Valid	7657	
17	2016-09-02 09:30	Chengjie	Eduardo	2342323523	Valid		
18	2017-03-19 17:55	Shahdan	Billy	242341234	Valid	5345	

- Fourth column, "Task ID" is there if each task has some kind of unique identification number. It is here simply for record keeping purposes and can be deleted if not needed.

- Fifth column, "Validity" allows to label each entry as "Valid", "Invalid" or "BUMP". Their function will be explained further on.

- The sixth column, "Confirmation ID" is there to record the fact that the task has been accepted and is being worked on. While columns 2—5 are meant to be filled in by the person assigning the task, the sixth column must be filled in by the person accepting the task. To emphasize this fact visually, the column names are highlighted with different colors.

Instructions.

This section will provide a step by step walkthrough of the Turn Manager. To do this, we shall make use of our earlier example:

| | Turn Manager | | Shift | | | |
| | | | Melaka Time | | Seoul Time | |
Name	Round	Attendance	Start	End	Start	End
Agnes	3	Working	07:00	16:00	08:00	17:00	
Billy	3	Working	08:00	17:00	09:00	18:00	
Chengjie	2	Not Working	10:00	19:00	11:00	20:00	
Eduardo	2	Working	07:00	16:00	08:00	17:00	
Fumiko	0	MC	12:30	21:30	13:30	22:30	
George	0	Working	13:30	22:30	14:30	23:30	
Jane	1	On Leave	13:30	22:30	14:30	23:30	
Lydia	2	Working	14:30	23:30	15:30	00:30	
Marhani	2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
Shahdan	1	Not Working	07:00	16:00	08:00	17:00	

Since George is the newest member of the team, the first task should go to him. Let's say Eduardo is in charge of assigning tasks today and he assigns 2 tasks over to George:

Assigned On	Assigned By	Assigned To	Task ID	Validity	Confirmation ID
2016-09-02 09:30	Chengjie	Eduardo	2342323523	Valid	
2017-03-19 17:55	Shahdan	Billy	242341234	Valid	5345
2017-03-20 20:23	Eduardo	George	44645758	Valid	
2017-03-20 20:23	Eduardo	George	979679670	Valid	

This will increase George's round by 2. Turn manager automatically recalculates the rounds and now will highlight all team members who are working and in round 2:

| | Turn Manager | | Shift | | | |
| | | | Melaka Time | | Seoul Time | |
Name	Round	Attendance	Start	End	Start	End
Agnes	3	Working	07:00	16:00	08:00	17:00	
Billy	3	Working	08:00	17:00	09:00	18:00	
Chengjie	2	Not Working	10:00	19:00	11:00	20:00	
Eduardo	2	Working	07:00	16:00	08:00	17:00	
Fumiko	0	MC	12:30	21:30	13:30	22:30	
George	2	Working	13:30	22:30	14:30	23:30	
Jane	1	On Leave	13:30	22:30	14:30	23:30	
Lydia	2	Working	14:30	23:30	15:30	00:30	
Marhani	2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
Shahdan	1	Not Working	07:00	16:00	08:00	17:00	

Now, let's say Eduardo has two more tasks to assign. He takes a second look at the Turn Manager and realizes that he is next in line, followed by George. Since George already had two tasks assigned to him and it's his first day on the job, Eduardo decides to be lenient to him. Thus Eduardo assigns the first task to himself, gives George a "BUMP" entry and assigns the second task to Lydia, who is next in line after George:

Assigned On	Assigned By	Assigned To	Task ID	Validity	Confirmation ID	
2016-09-02 09:30	Chengjie	Eduardo	2342323523	Valid		
2017-03-19 17:55	Shahdan	Billy	242341234	Valid	5345	
2017-03-20 20:23	Eduardo	George	44645758	Valid		
2017-03-20 20:23	Eduardo	George	979679670	Valid		
2017-03-20 20:41	Eduardo	Eduardo	1242235235	Valid		
2017-03-20 20:41	Eduardo	George		BUMP		First Day on the Job
2017-03-20 20:41	Eduardo	Lydia	23412556	Valid		

This is how the Turn Manager looks now:

	A	B	C	D	E	F	G	
	Turn Manager			Shift				
				Melaka Time		Seoul Time		
	Name	Round	Attendance	Start	End	Start	End	
	Agnes	3	Working	07:00	16:00	08:00	17:00	
	Billy	3	Working	08:00	17:00	09:00	18:00	
	Chengjie	2	Not Working	10:00	19:00	11:00	20:00	
	Eduardo	3	Working	07:00	16:00	08:00	17:00	
	Fumiko	0	MC	12:30	21:30	13:30	22:30	
	George	3	Working	13:30	22:30	14:30	23:30	
	Jane	1	On Leave	13:30	22:30	14:30	23:30	
	Lydia	3	Working	14:30	23:30	15:30	00:30	
	Marhani	2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
	Shahdan	1	Not Working	07:00	16:00	08:00	17:00	

Now, the lowest round among working team members is 3, so next task will got to Agnes, then Billy and so on, until the end of the shift.

Finally, lest say that after Lydia got the task assigned to her, she goes to perform it and realizes that there is actually no work to be done.

She reports this back to Eduardo, who changes the status of her task in "Record" sheet to "Invalid".

Assigned On	Assigned By	Assigned To	Task ID	Validity	Confirmation ID	
2016-09-02 09:30	Chengjie	Eduardo	2342323523	Valid		
2017-03-19 17:55	Shahdan	Billy	242341234	Valid	5345	
2017-03-20 20:23	Eduardo	George	44645758	Valid		
2017-03-20 20:23	Eduardo	George	979679670	Valid		
2017-03-20 20:41	Eduardo	Eduardo	1242235235	Valid		
2017-03-20 20:41	Eduardo	George		BUMP		First Day on the Job
2017-03-20 20:41	Eduardo	Lydia	23412556	Invalid		

This in turn, changes her rank in the "Turn Manager" back to 2. Hence, the next task will now go to Lydia once again:

Turn Manager			Shift				
			Melaka Time		Seoul Time		
Name	Round	Attendance	Start	End	Start	End	
Agnes	3	Working	07:00	16:00	08:00	17:00	
Billy	3	Working	08:00	17:00	09:00	18:00	
Chengjie	2	Not Working	10:00	19:00	11:00	20:00	
Eduardo	3	Working	07:00	16:00	08:00	17:00	
Fumiko	0	MC	12:30	21:30	13:30	22:30	
George	3	Working	13:30	22:30	14:30	23:30	
Jane	1	On Leave	13:30	22:30	14:30	23:30	
Lydia	2	Working	14:30	23:30	15:30	00:30	
Marhani	2	Other	16:00	01:00	17:00	02:00	Resigning in two weeks
Shahdan	1	Not Working	07:00	16:00	08:00	17:00	

This covers the basic set of operations within the "Turn Manager" program. There does remain a couple of supplementary topics to cover.

If this program is used for a prolonged period of time, the individual rounds of each team member can easily exceed 100. While this is not a problem in itself, it will make adding new team members quite difficult. Since each new member starts at zero, a large number of BUMP entries will have to be made for them in the "Record" sheet. To solve this problem, old entries in the "Record" sheets must be occasionally moved to the "Archive" sheet.

Lastly, take note that some of the cells in "Record" sheet are highlighted yellow. This simply indicates missing entries and encourages better record keeping.