

Shift Scheduler Spreadsheet

Professional Employee Shift Scheduler for Excel

<http://spreadsheetml.com/shiftschedules/shiftscheduler.shtml>

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ConnectCode's Shift Scheduling Templates

Have you thought about how many times you use or reuse your shift scheduling spreadsheets? Everyday, day after day, shift after shift and spreadsheet after spreadsheet. We definitely have. That is why we build all our shift scheduling templates to be reusable, customizable and easy to understand. We also test our templates with different scenarios vigorously, so that you know you can be assured of their accuracy and quality and that you can save significant amount of time by reusing them. We have also provided comprehensive documentation on the templates so that you do not need to guess or figure out how we implemented the spreadsheets.

All our template models are only in black and white color. We believe this is how a professional shift scheduling template should look like and also that this is the easiest way for you to understand and use the templates. All the input fields are marked with the '' symbol for you to identify them easily.*

Whether you are a project manager, restaurant owner or human resource personnel. Or whether you are a student aspiring to join the management world or an entrepreneur needing to manage schedules, we hope that you will find this package useful as we have spent our best effort and a lot of time in developing them.

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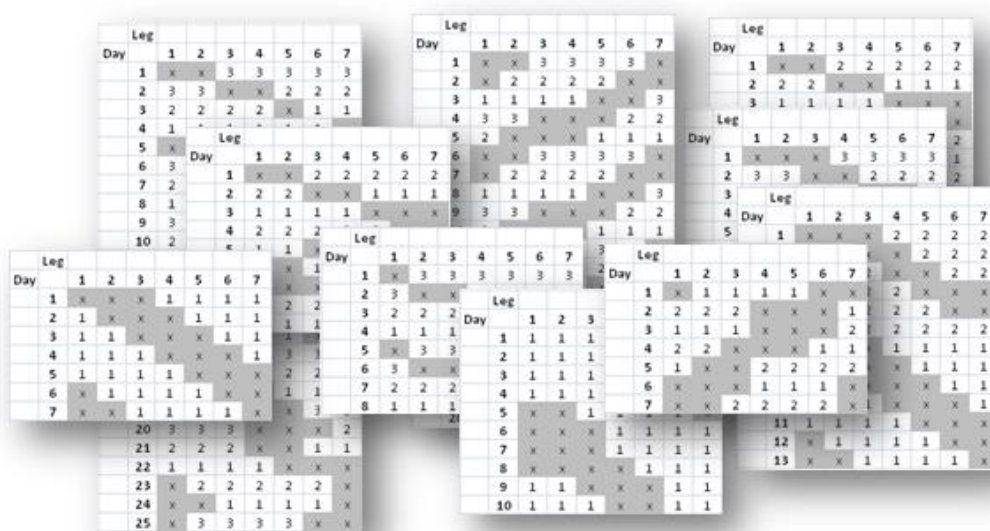
1. Employee Shift Scheduler

1.1 Overview

Scheduling employee shifts can be a complex and difficult task. This is especially true when there are a large number of employees and many shift constraints. On top of that, shift work has never been popular and this may result in employee morale problems if not handled carefully.

This professional spreadsheet package can be used to assign up to 50 employees to 12 different shifts over a six months period. Employees can be assigned to work in a constant fixed shift or be rotated among the different shifts.

Over hundreds of commonly-used shift patterns are provided in the package. These patterns have been proven in the industry and have received numerous feedbacks and improvements from both the employees and employers. The patterns take into account employee productivity and morale concerns to ensure that sufficient rest period is provided before employee change shift, as compared to using a programming algorithm to schedule the employees without a human touch.



Swapping of shifts and Overtimes are also supported in the spreadsheet. The different scenarios e.g. two employees swapping their shifts with each other or several employees working overtime to cover an absent employee can be handled with ease by the package.

The final schedule, shift summary information and overtime hour's information can be printed easily on an A4 paper using the Landscape mode. Individual employee schedule and calendar can also be printed.

In essence, this package takes the pain out of shift scheduling and provides you with an easy, professional and proven way to schedule the employees with a human touch.

1.2 A simple overview on the use of the Employee Shift Scheduler

The aim of the spreadsheet package is to generate a shift schedule as shown in the diagram below. In the diagram, a calendar is generated for the month of April and the different employee shifts are shown.

An "x" indicates a day off for the employee, while a number "1" indicates the employee is on the shift number 1. This may seem trivial initially; but with a large number of employees, scheduling them in a fair and productive manner becomes difficult. For example, if there are different types of shifts like day and night shifts and an employee is required to rotate among the different shifts, it is important to give the employee sufficient rest before switching his shifts.

	A	B	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
3			April-10																													
4	ID	Employee Names	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr
5			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6	1	Michael					1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1
7	2	Mark					x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1
8	3	Tony					1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	x	x
9	4	James					1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1
10	5	Anthony					x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	1	1	1
11	6	Steve					1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	x	x

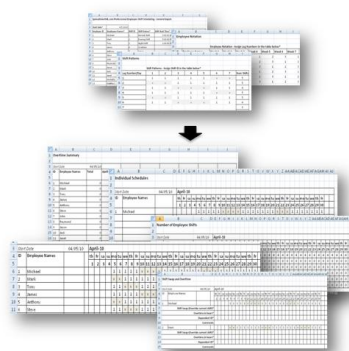
On top of that, from a productivity perspective, it is also important to give the employees a break for every x number of days worked to have well-rested and productive employees in their shifts.

The spreadsheet provides shift patterns and also a means to customize the shift easily so that the different constraints can be met easily. Our spreadsheet is able to meet the different shift requirements in an easy and efficient way.

1.2.1 Workflow

This section describes the workflow of using the spreadsheet. The software spreadsheet package starts by requesting the following information.

- Employee information like names and shift information
- How to organize the different shifts
- How to rotate the employees in the different shifts



1.2.1.1 Shift Patterns

Commonly-used shift patterns (over hundreds of them) from the industry are provided to assist you in organizing the shifts. Customization of existing shift patterns can also be carried out easily by changing the cells in the spreadsheet to cater to additional management constraints.

1.2.1.2 Output Schedule

Upon entering the input information, an Initial Schedule over a six months period will be generated. Schedules over a weekly, monthly, bi-monthly, quarterly and half yearly period are also supported. The aim is to be able to meet your shift schedule requirements quickly and easily without affecting employees' morale.

1.2.1.3 Individual Schedules

Individual employee schedule can be generated automatically and be printed easily. This allows each employee to clearly understand the different shifts he or she is required to work on.

1.2.1.4 Shifts Swapping

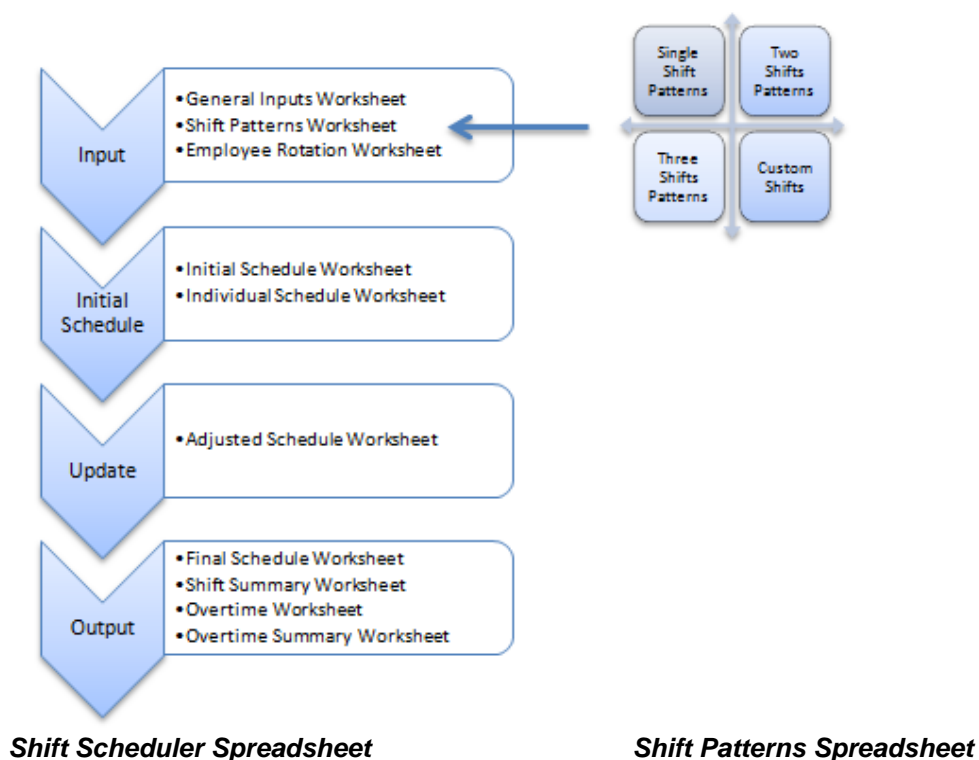
Throughout the shift work period, employees may require swapping of shifts with their colleagues due to unforeseen circumstances. There may also be the scenario that if an employee is absent, several other employees are required to work overtime in order to cover the shift. Such scenario can be handled and supported in the spreadsheet. Upon the completion of the entire shift work period, a final overall schedule, overtime information and shift summary information are automatically generated. This allows the management to see the operating capabilities of their organization.

1.2.2 Actual worksheets of the Shift Scheduler spreadsheet

With the understanding of the workflow above, the diagram below shows the actual spreadsheets (Shift Scheduler spreadsheet and Shift Patterns spreadsheet) and the actual worksheets used in the different stages of the shift scheduling.

During the **Input** stage, data are entered into the General Inputs, Shift Patterns and Employee Rotation worksheets. Common shift patterns from the industry can be retrieved and used from the Shift Patterns spreadsheet, as shown on the right hand side of the diagram.

After the inputs are entered, an **Initial Schedule** will be generated. This schedule contains the shift schedules of all the employees for the next six months or other specified periods. Individual employee schedule is also available at this point in time for getting feedbacks if necessary.



Throughout the entire shift work period (**Update** stage), employees can swap shifts or choose to work overtime using the Adjusted Schedule worksheet. Finally, the worksheets in the **Output** stage provide summary information that can be printed easily on A4 paper in Landscape mode.

To conclude, the following worksheets require inputs or updates:

- General Inputs Worksheet
- Shift Patterns Worksheet
- Employee Rotation Worksheet
- Adjusted Schedule Worksheet

The following worksheets are generated automatically:

- Initial Schedule Worksheet
- Final Schedule Worksheet
- Shift Summary Worksheet
- Overtime Worksheet
- Overtime Summary Worksheet

2. Shift Patterns Spreadsheet

Before going into the details of using the Shift Scheduler spreadsheet, we will discuss the use of the Shift Patterns spreadsheet. This spreadsheet contains over hundreds of one, two and three shift patterns.

These patterns can be copied to the Shift Patterns worksheet in the Shift Scheduler spreadsheet to schedule the employees quickly and easily. The patterns have also been proven in the industry and serve as a good starting point to work on.

The sections below provide a basic understanding of the different shift patterns and how to use them.

2.1.1 Single Shift Patterns

In the diagram below, each column as shown by the vertical arrow are the different days of the week. The seven days of the week are shown by the number "1..7". Each row shows the different Legs that an employee can work on.

A Leg is defined as a particular shift pattern in a particular week. The "x" indicates a day off. A working day is shown as a shift number (or shift ID). The number "1" in the diagram is used to indicate Shift 1, which is a working day.

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In the row indicated by the horizontal arrow, an employee is working on day 1, 2, 3, 4 and 5 of the week and having off-day in day 6 and 7.

An employee can be scheduled to work on any of the Legs and a total of 3 employees are required by the organization to work on the three different legs. The specific shift pattern above will always have 2 employees available during a shift (in this case shift 1). This information is also summarized in the "Number of Employees required" and "Number of Employees per Shift" fields.

2.1.2 Two Shifts Patterns

The diagram below is a shift pattern for employees whose organization requires two different shifts each day. The two different shifts are indicated by the number 1 and 2. The minimum number of employees per shift is 1.

It is interesting to note that the shift pattern provides 3 days off (break) before an employee change from shift 1 to shift 2. Industry experience has shown that it is the most productive to the company and beneficial to the employee to provide a rest period during the transition of shifts. This gives employees sufficient rest and time to adjust to the new shift.

	Leg								
Day	1	2	3	4	5	6	7		
1	1	1	x	x	x	2	2	Number of Employees required	3
2	2	2	2	2	2	x	x	Number of Employees per Shift	1
3	x	x	1	1	1	1	1		

2.1.3 Three Shifts Patterns

The diagram below shows a 3-shifts pattern. The shift pattern also provides rest time between shifts. At this point, it is important to note that the different shift patterns, including the one shift and two shifts patterns, can be further combined to schedule large number of employees. For example, 50 employees can be scheduled by breaking them into two 25-employees groups.

Day	Leg								
	1	2	3	4	5	6	7		
1	x	3	3	3	3	3	3	Number of Employees required	8
2	3	x	x	2	2	2	2	Number of Employees per Shift	2
3	2	2	2	x	x	1	1		
4	1	1	1	1	1	x	x		
5	x	3	3	3	3	3	3		
6	3	x	x	2	2	2	2		
7	2	2	2	x	x	1	1		
8	1	1	1	1	1	x	x		

All the shift patterns can be customized by changing the value of the cells.

2.1.4 Rotating Legs

With a shift pattern, an employee can be scheduled to work on a particular Leg every week. Alternatively the employees can be scheduled to rotate among the different Legs each week. For example, employee 1 will work on Leg 1 on Week 1 and Leg 2 on Week 2 and Leg 3 on Week 3 and so on. In addition, some shift patterns allow employees to be rotated on different Legs but still work on only 1 type of shifts. We will be explaining these in the three cases below.

The diagram below shows a two 7 legs shift patterns. Both patterns are similar as they require a total of 7 employees and 2 employees to be present in each of the shift.

Day	Leg								
	1	2	3	4	5	6	7		
1	2	2	2	2	2	x	x	Number of Employees required	7
2	x	x	2	2	2	2	2	Number of Employees per Shift	2
3	2	2	x	x	x	2	2		
4	x	x	x	1	1	1	1		
5	1	1	x	x	x	1	1		
6	1	1	1	x	x	x	x		
7	x	x	1	1	1	x	x		

Day	Leg								
	1	2	3	4	5	6	7		
1	x	1	1	1	1	x	x	Number of Employees required	7
2	2	2	2	x	x	x	1	Number of Employees per Shift	2
3	1	1	1	x	x	x	2		
4	2	2	x	x	x	1	1		
5	1	x	x	2	2	2	2		
6	x	x	x	1	1	1	x		
7	x	x	2	2	2	2	x		

2.1.4.1 Fix Leg

The first way to schedule the employees is to assign an employee to a specific leg. For example as in the table below:

ID	Employee Names	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
1	Michael	1	1	1	1	1	1	1
2	Mark	2	2	2	2	2	2	2
3	Tony	3	3	3	3	3	3	3
4	James	4	4	4	4	4	4	4
5	Anthony	5	5	5	5	5	5	5
6	Steve	6	6	6	6	6	6	6
7	John	7	7	7	7	7	7	7

In this case, the employee Michael will always be working on Leg 1 in different weeks of the scheduling period. This type of fix scheduling can be easily applied to both shift patterns above and is very simple and less confusing to the employees.

However, such scheduling can sometimes lead to resentment from the employees if they feel that their Leg is not the most optimal one. For example, the employee of Leg 1 of the first shift pattern above might feel that he or she only have 2 days off per week compared to the employee working on Leg 6 who is having 4 days off per week.

2.1.4.2 Rotating Legs

To rotate the employees to the different legs, one can rotate the employees every week to a different Leg. This is as shown in the diagram below. The employee Michael works on Leg 1 in the first week and Leg 2 on the second week and so on.

ID	Employee Names	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
1	Michael	1	2	3	4	5	6	7
2	Mark	2	3	4	5	6	7	1
3	Tony	3	4	5	6	7	1	2
4	James	4	5	6	7	1	2	3
5	Anthony	5	6	7	1	2	3	4
6	Steve	6	7	1	2	3	4	5
7	John	7	1	2	3	4	5	6

This type of rotation can also be applied to both shift patterns mentioned above. Many employees find this type of rotation fairer. However it is important to schedule enough off days between the shifts. In this case, using a proven shift pattern will definitely help.

2.1.4.3 Rotating Legs within each type of shift

The first shift pattern mentioned above (section 2.1.4) is replicated in the diagram below. This specific pattern allows for an additional type of employee rotation. It is possible to schedule the employees to rotate among the legs but still work on specific shifts.

Notice that Leg 1, 2 and 3 only require employees to work on shift 2, and Leg 4, 5, 6 and 7 require the employees to work on shift 1.

	Leg																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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The table below shows how to use the above shift pattern to schedule employees such that they are rotated but are always working on certain type of shifts. Employee 1, 2 and 3 are rotated on Leg 1, 2 and 3. These 3 employees will only work on shift 1.

ID	Employee Names	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
1	Michael	1	2	3	1	2	3	1
2	Mark	2	3	1	2	3	1	2
3	Tony	3	1	2	3	1	2	3
4	James	4	5	6	7	4	5	6
5	Anthony	5	6	7	4	5	6	7
6	Steve	6	7	4	5	6	7	4
7	John	7	4	5	6	7	4	5

This type of rotation allows employees with specific time constraints to be scheduled easily. For example, some employees may have family considerations and can only work on day shifts.

2.1.4.4 Conclusion

To conclude, we found most organizations use the Rotating Legs method. One of the main reasons is that it is fairer by ensuring that all employees work the same number of shifts and hours. It is also easier for calculating payroll and employees do not need to go through a monotonous and repetitive work-week period. However there will be instances when you find the "Fix Legs" and "Rotating Legs within each type of shift" method more useful.

3. Shift Scheduler Spreadsheet

This section describes the different worksheets of the Shift Scheduler spreadsheet in details. If you recall from the previous section, only the following worksheets require user inputs or updates:

- General Inputs Worksheet
- Shift Patterns Worksheet
- Employee Rotation Worksheet
- Adjusted Schedule Worksheet

The rest of the worksheets are generated automatically. All the input fields are also marked with the '*' symbol for you to identify them easily.

3.1 Inputs worksheet

This worksheet lets you specify the Start Date of the shift schedule, the Names of the employees, the Names of the shifts, the Start/Stop time of the shifts and the number of hours of each shift. A maximum of 25 employees and 6 types of shifts are supported.

	A	B	C	D	E	F	G
1	SpreadsheetML.com Professional Employee Shift Scheduling - General Inputs						
2							
3	Start Date*	4/5/2010					
4	Employee ID	Employees Names*	Shift ID	Shift Names*	Shift Start Time*	Shift Stop Times*	Shift Hours*
5	1	Michael	1	Normal Shift	9:00:00 AM	5:00:00 PM	8
6	2	Mark	2	Evening Shift	5:00:00 PM	1:00:00 AM	8
7	3	Tony	3	Night Shift	1:00:00 PM	9:00:00 AM	8
8	4	James	4	Overtime			8
9	5	Anthony	5	Leave			0
10	6	Steve	6	Medical			0
11	7	John					
12	8	Raymond					
13	9	Jason					
14	10	Jack					
15	11	Janet					
16	12	Michelle					
17	13	Matthew					

This shift information from cell C4 to G10 can be printed. The start and stop shift time is actually not used by other parts of the spreadsheet. It is only used to maintain a consistent understanding of the shift hours.

3.2 Shift Patterns worksheet

This is the worksheet that lets you specify the shift patterns. The portion highlighted in red requires your inputs. You can copy the shift patterns from the Shift Patterns spreadsheet to schedule the employees.

The letter "x" is used to specify days off while numbers 1 to 6 indicate shift numbers. The advantage of using Excel for shift scheduling can be easily seen here. For example, you can select a group of cells and change the shift number from 1 to 2 by using the Excel replace function. The Num Shifts field shows the number of shifts to be worked on for that specific week (Leg).

	A	B	C	D	E	F	G	H	I
1	Shift Patterns								
2									
3		Shift Patterns - Assign Shift ID in the table below*							
4	Leg Number/Day	1	2	3	4	5	6	7	Num Shifts
5	1	1	1	1	1	1	x	x	5
6	2	x	x	1	1	1	1	1	5
7	3	1	1	x	x	x	1	1	4
8	4	1	1	1	1	1	x	x	5
9	5	x	x	1	1	1	1	1	5
10	6	1	1	x	x	x	1	1	4
11	7								0

A summary of the total number of employees on each type of shift is provided in a table as shown below. The table shows 4 employees working on Shift 1 throughout the week. This table is helpful when you need to customize the shift patterns.

31	Num Emp (ShiftID 1)	4	4	4	4	4	4	4
32	Num Emp (ShiftID 2)	0	0	0	0	0	0	0
33	Num Emp (ShiftID 3)	0	0	0	0	0	0	0
34	Num Emp (ShiftID 4)	0	0	0	0	0	0	0
35	Num Emp (ShiftID 5)	0	0	0	0	0	0	0
36	Num Emp (ShiftID 6)	0	0	0	0	0	0	0

3.3 Employee Rotation worksheet

This worksheet is used for assigning employees to the different Legs specified in the Shift Patterns worksheet. The portion highlighted in red requires your inputs.

In the diagram below, the employee Michael is working on Leg 1 on Week 1 and Leg 2 on Week 2 and so on. To assign employees to just one specific Leg, simply assign a single Leg number. For example, assigning Michael to Leg 1 on all the weeks will simply assign him to work on Leg 1 throughout the schedule.

	A	B	C	D	E	F	G	H	I
1	Employee Rotation								
2									
3		Employee Rotation - Assign Leg Numbers in the table below*							
4	ID	Employee Names	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
5	1	Michael	1	2	3	1	2	3	1
6	2	Mark	2	3	1	2	3	1	2
7	3	Tony	3	1	2	3	1	2	3
8	4	James	1	2	3	1	2	3	1
9	5	Anthony	2	3	1	2	3	1	2
10	6	Steve	3	1	2	3	1	2	3

A maximum of 25 weeks can be assigned, after which, a new schedule will need to be generated. This allows weekly, monthly, bi-monthly, quarterly and half-yearly schedules to be generated. We encourage using a schedule that is shorter than a yearly schedule to keep the schedule simple to maintain and be able to react to changes quickly and flexibly. It is also important not to use a schedule that is too short as employees need time to adjust to the new schedule.

3.4 Initial Schedule worksheet

Upon entering the information for the first three worksheets mentioned above, an initial schedule will be generated in this worksheet. This is a monthly calendar (up to 25 weeks) that shows the assignments of Legs of all the employees. The worksheet can be printed on an A4 paper in Landscape mode. This schedule can be submitted for management approval. It can also be used to solicit feedbacks from the employees.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ				
1	Initial Schedule																																							
2																																								
3	Start Date		04/05/10	April-10																																				
4	ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
6	1	Michael						1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1		
7	2	Mark						x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1		
8	3	Tony						1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	1	1	x	x	x				
9	4	James						1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1		
10	5	Anthony						x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1		
11	6	Steve						1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	1	1	1	x	x	x		
12	7	John																																						
13	8	Raymond																																						
14	9	Jason																																						
15	10	Jack																																						
16	11	Janet																																						
17	12	Michelle																																						
18	13	Matthew																																						

The first arrow in the diagram below shows the shift numbers (ID). The shift numbers (ID) is defined in the General Inputs worksheet and assigned in the Shift Patterns and Employee Rotation worksheet. A letter "x" indicates an off day. An empty space as shown by the second arrow indicates that the specified date is not part of the shift scheduling period.

Start Date		04/05/10	April-10																					
ID	Employee Names			th	fr	sa	su	mo	tu	we	th	fr	sa											
				1	2	3	4	5	6	7	8	9	10											
1	Michael							1	1	1	1	1	x											
2	Mark							x	x	1	1	1	1											
3	Tony							1	1	x	x	x	1											
4	James							1	1	1	1	1	x											
5	Anthony							x	x	1	1	1	1											
6	Steve							1	1	x	x	x	1											

3.5 Adjusted Schedule worksheet

This is the worksheet used for handling swapping of shifts among the employees and overtime clocked by employees for covering absentees.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ				
1	Shift Swap and Overtime																																							
2																																								
3	Start Date			04/05/10		April-10																																		
4	ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
6	1	Michael						1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1			
7	Shift Swap (Override current shift)*																																							
8	Overtime in hours*																																							
9	Dependent ID*																																							
10	Comments																																							
11	2	Mark						x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1				
12	Shift Swap (Override current shift)*																																							
13	Overtime in hours*																																							
14	Dependent ID*																																							
15	Comments																																							

The rows in bold as shown in the diagram below allows shift swapping and overtime information to be entered. The Dependent ID is used when an employee works overtime. For example, you enter Employee ID 2 into the Dependent ID cell if there is overtime incurred for covering Employee ID 2 who is absent. The Comments field is an open ended field for entering Shift Swap or Overtime comments or other information.

ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa
			1	2	3	4	5	6	7	8	9	10
1	Michael						1	1	1	1	1	x
Shift Swap (Override current shift)*												
Overtime in hours*												
Dependent ID*												
Comments												

3.5.1 Shift Swap

A drop-down list will automatically appear when a cell in the Shift Swap row is selected. Any shift numbers (ID) defined in the General Inputs worksheet can be selected.

ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa
			1	2	3	4	5	6	7	8	9	10
1	Michael						1	1	1	1	1	x
Shift Swap (Override current shift)*								1				
Overtime in hours*								1				
Dependent ID*								2				
Comments								3				
								4				
								5				

The new shift selected will override the existing shift previously scheduled for the employee. This is shown in the diagram below. Typically, if two employees swap shifts, the Shift Swap rows for both the employees will be changed.

ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa
			1	2	3	4	5	6	7	8	9	10
1	Michael						2	1	1	1	1	x
Shift Swap (Override current shift)*							2					
Overtime in hours*												
Dependent ID*												
Comments												

3.5.2 Overtime

The Overtime field is best explained using an example as shown in the diagram below. The first arrow in the diagram below shows Employee ID 1 absent on Monday. The second arrow shows Employee ID 2 working overtime for 4 hours to cover the absent employee. The Dependent ID shows the ID of the absent employee. And in this case, another employee is required to work overtime for another 4 hours to fully cover the absent employee.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
4	ID	Employee Names			th	fr	sa	su	mo	tu	we	th	fr	sa	su
5					1	2	3	4	5	6	7	8	9	10	11
6	1	Michael							x	1	1	1	1	x	x
7	Shift Swap (Override current shift)*								x						
8	Overtime in hours*														
9	Dependent ID*														
10	Comments														
11	2	Mark								x	1	1	1	1	1
12	Shift Swap (Override current shift)*														
13	Overtime in hours*								4						
14	Dependent ID*								1						
15	Comments				Covering half of the shift for Michael.										

The overtime information will be summarized and consolidated in the Overtime and Overtime Summary worksheets.

3.6 Final Schedule worksheet

This worksheet shows the final schedule after the shift swaps among the different employees to show the actual shift work carried out by the employees. This format is exactly the same as the Initial Schedule. The worksheet can be printed on A4 paper using Landscape mode easily.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI					
1	Final Schedule																																							
2																																								
3	Start Date		04/05/10	April-10																																				
4	ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
6	1	Michael						1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1		
7	2	Mark						x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1		
8	3	Tony						1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	1	x	x	x					
9	4	James						1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1		
10	5	Anthony						x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1		
11	6	Steve						1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	1	x	x	x					
12	7	John																																						
13	8	Raymond																																						
14	9	Jason																																						
15	10	Jack																																						
16	11	Janet																																						
17	12	Michelle																																						
18	13	Matthew																																						

3.7 Shift Summary worksheet

The Shift Summary worksheet calculates and sums the number of employees working on the different shifts. You can use this worksheet to see if specific requirement like minimum number of employees per shift is met. In the diagram below, it shows 4 employees are working on the Normal Shift from the 5th of April to 30th April. If the minimum number of employees on the Normal Shift is 4 and in some of the days it is below 4, you can investigate the cause by looking at the Adjusted Schedule worksheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ					
1	Number of Employee Shifts																																								
2																																									
3	Start Date		04/05/10	April-10																																					
4	ID	Shift Names		th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30								
6	1	Normal Shift		0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0		
7	2	Evening Shift		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8	3	Night Shift		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9	4	Overtime		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10	5	Leave		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11	6	Medical		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12																																									

3.8 Overtime worksheet

This worksheet summarizes the number of overtime hours clocked by the employees each day throughout the schedule period. The total number of overtime hours per month per employee is also provided.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI					
1	Overtime Hours																																							
2																																								
3	Start Date		04/05/10	April-10																																				
4	ID	Employee Names	Total	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
6	1	Michael	0																																					
7	2	Mark	0																																					
8	3	Tony	0																																					
9	4	James	0																																					
10	5	Anthony	0																																					
11	6	Steve	0																																					
12	7	John	0																																					
13	8	Raymond	0																																					
14	9	Jason	0																																					
15	10	Jack	0																																					
16	11	Janet	0																																					
17	12	Michelle	0																																					
18	13	Matthew	0																																					

3.9 Overtime Summary worksheet

The Overtime Summary worksheet provides overtime hours clocked by the employees in a monthly total format. This is useful for calculating the overtime pay and for keeping track of employees working overtime.

	A	B	C	D	E	F	G	H	I	J
1	Overtime Summary									
2										
3	Start Date		04/05/10							
4	ID	Employee Names	Total	April-10	May-10	June-10	July-10	August-10	September-10	October-10
5										
6	1	Michael	0	0	0	0	0	0	0	0
7	2	Mark	0	0	0	0	0	0	0	0
8	3	Tony	0	0	0	0	0	0	0	0
9	4	James	0	0	0	0	0	0	0	0
10	5	Anthony	0	0	0	0	0	0	0	0
11	6	Steve	0	0	0	0	0	0	0	0
12	7	John	0	0	0	0	0	0	0	0
13	8	Raymond	0	0	0	0	0	0	0	0
14	9	Jason	0	0	0	0	0	0	0	0
15	10	Jack	0	0	0	0	0	0	0	0
16	11	Janet	0	0	0	0	0	0	0	0
17	12	Michelle	0	0	0	0	0	0	0	0
18	13	Matthew	0	0	0	0	0	0	0	0

3.10 Individual Schedule worksheet

The Initial Schedule and Final Schedule show the shift schedules of all employees in one single table. This is useful for the supervisors to see who works on which shift.

Employees, on the other hand, may prefer their own personal shift schedule. This worksheet contains the individual schedule of each employee. The schedule can be printed on A4 paper in Landscape mode easily.

The individual schedule for the employee Michael is as shown below.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	
1	Individual Schedules																																				
2																																					
3	Start Date		04/05/10	April-10																																	
4	ID	Employee Names		th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	
5				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
6	1	Michael					1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1		
7				May-10																																	
8				sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo			
9				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
10				x	x	x	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1		
11				June-10																																	
12				tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we				
13				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
14				1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1		
15				July-10																																	
16				th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa			
17				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
18				1	1	x	x	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	1	