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# **Clinician Scheduler Documentation**

***Release 2.0***

**David Landsman**

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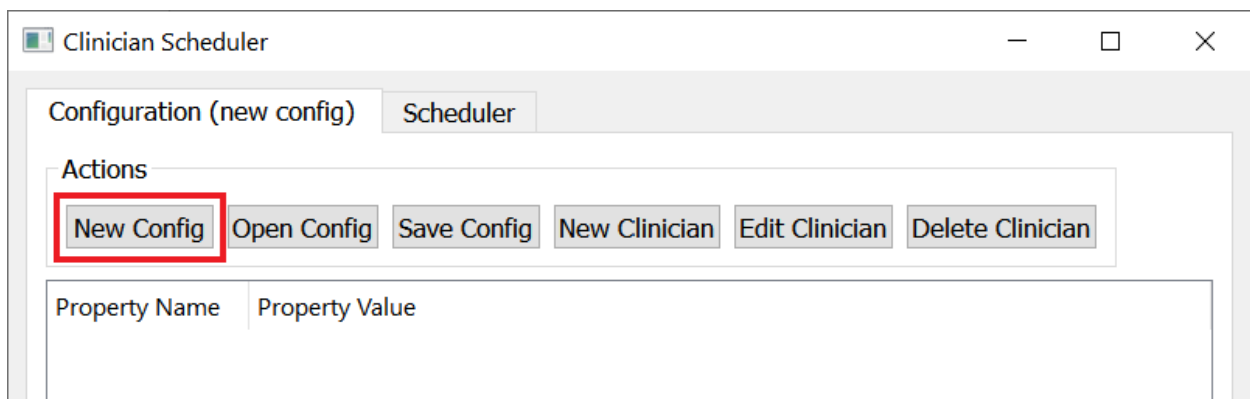


## CLINICIAN CONFIGURATION

The clinician configuration specifies which clinicians are available, which divisions they are covering, and how many weeks they should cover in each of their divisions.

### 1.1 Creating a new configuration file

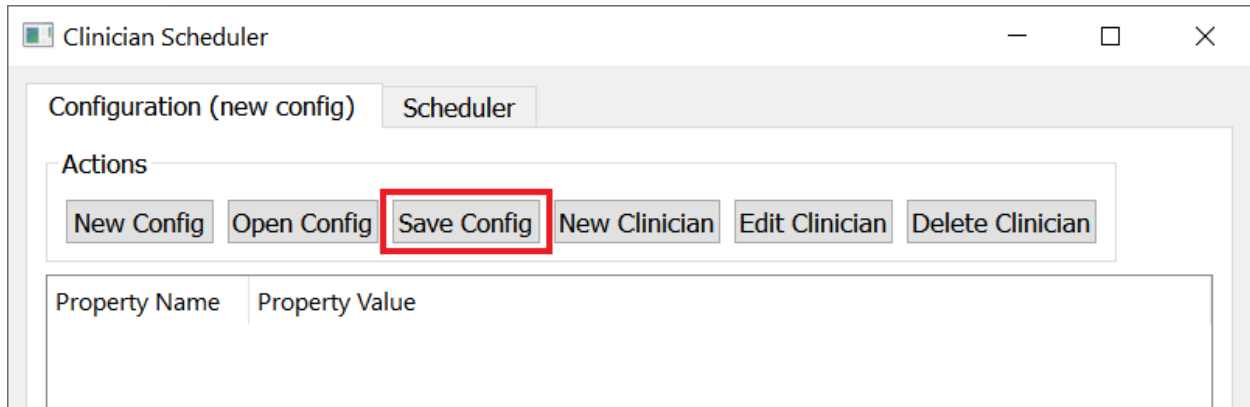
By default, you will get a blank configuration file when you launch the program. If you would like to discard the changes you have made and start a configuration file from scratch, simply click on *New Config*.



**Warning:** Unsaved changes to a configuration file will be discarded upon clicking on *New Config*.

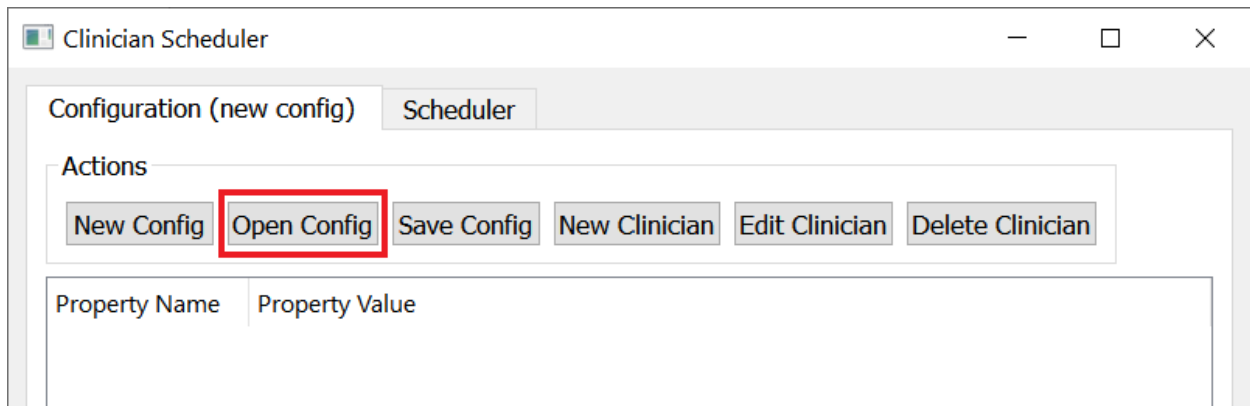
### 1.2 Saving the configuration file

When you are ready to save the configuration you created, click on *Save Config* and choose a place to save your file. Make note of the name and directory of the file so you could load it in future runs.



### 1.3 Loading a configuration file

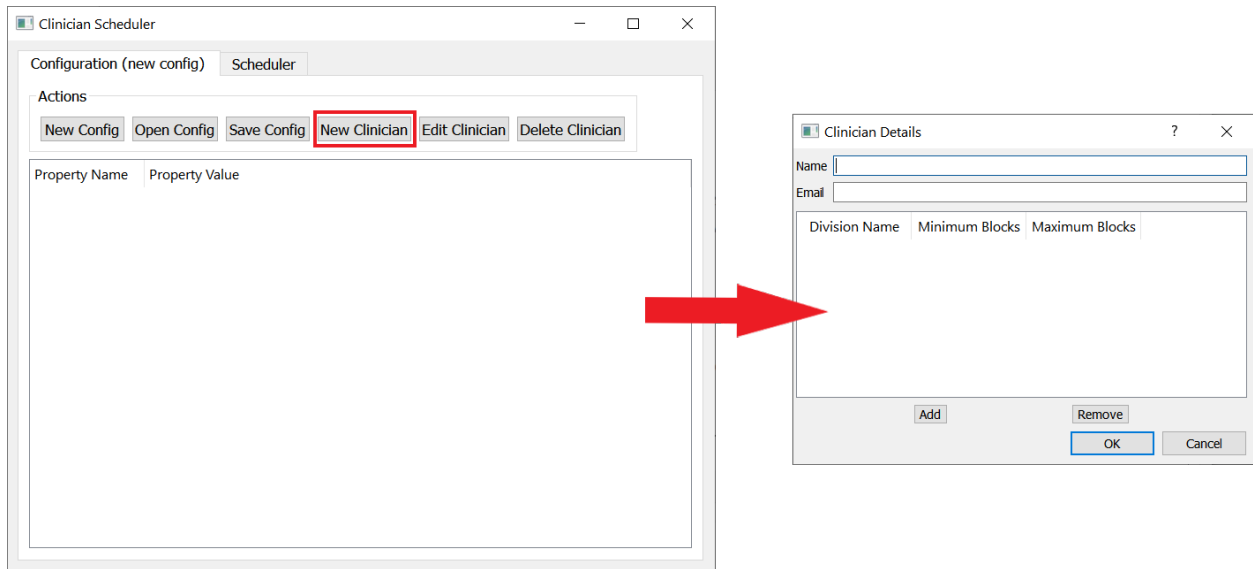
If you would like to open a previously created configuration file, simply click on *Open Config*, navigate to the location of the file, and select it.



### 1.4 Adding a new clinician

1. From the configuration tab, click *New Clinician*. You should see a form for supplying clinician details.





2. Fill out the name, email (optional), and divisions that the clinician will be covering. To add a division you can click on *Add* and a new row will be added to the table which you can fill out. You can set the minimum and maximum number of blocks that a clinician can work in a given division.

**Note:** A single block corresponds to two weeks.

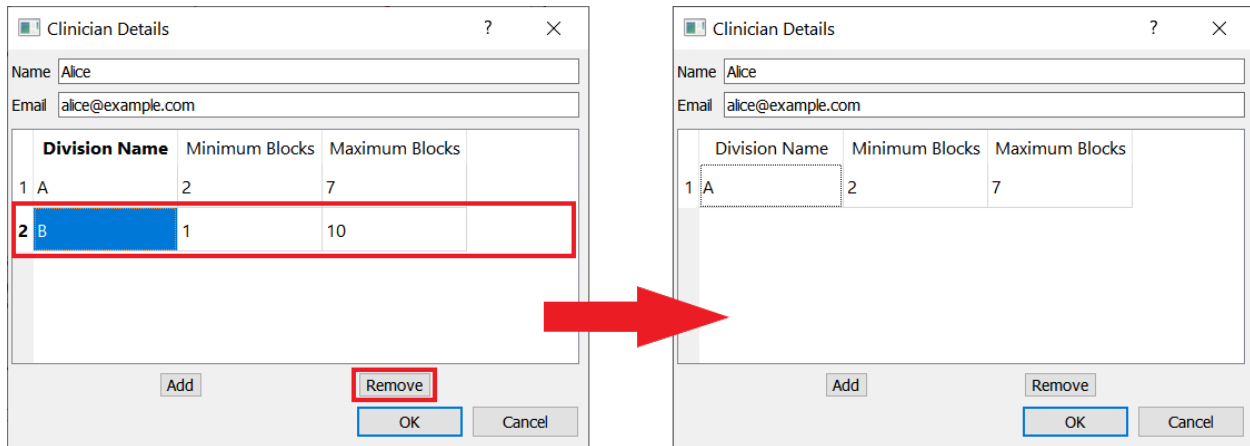
The screenshot shows the 'Clinician Details' dialog with the following data entered:

- Name:** Alice
- Email:** alice@example.com
- Table:**

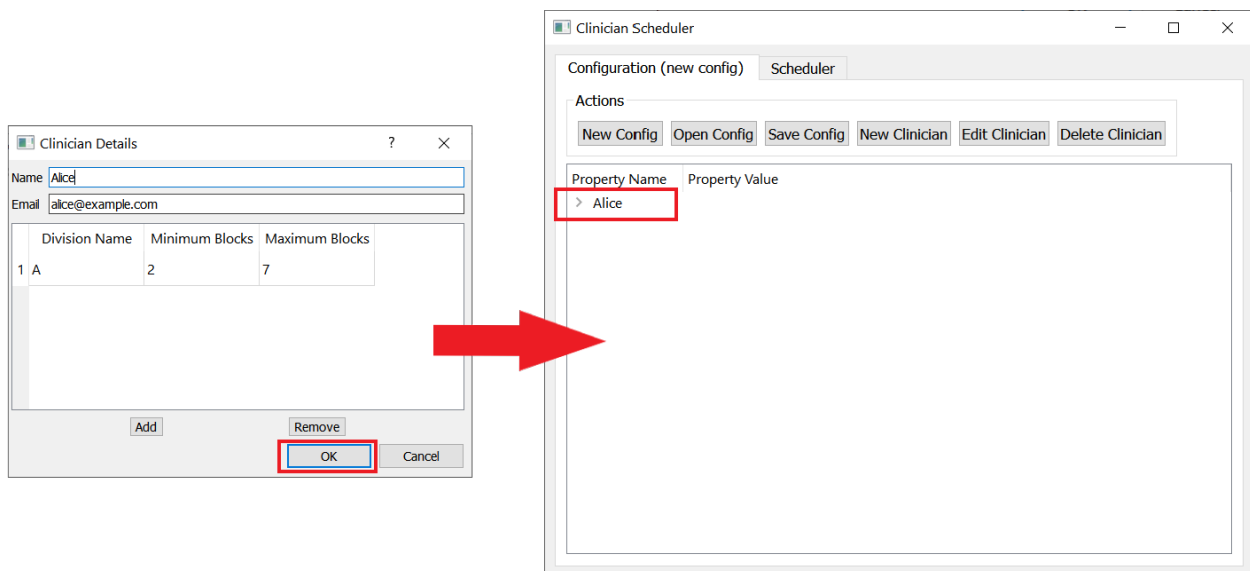
	Division Name	Minimum Blocks	Maximum Blocks
1	A	2	7

The 'Add' button is highlighted with a red box, indicating the next step in the process.

3. To delete a row from the table, select the row and then click *Remove*.

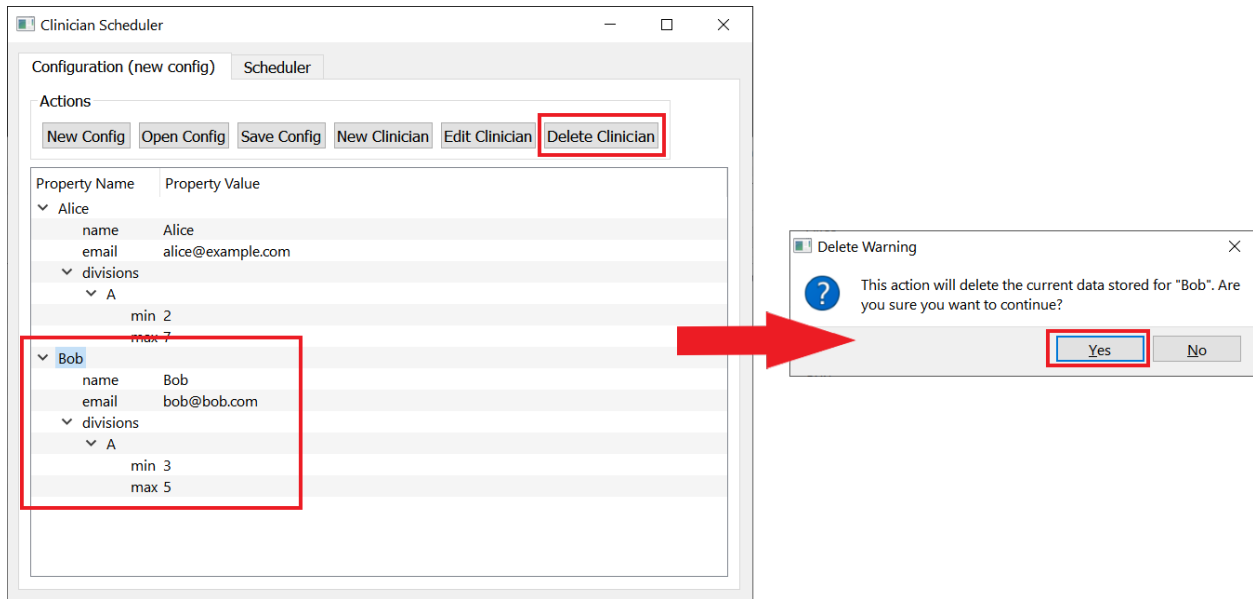


4. When you are finished entering the data for the clinician, click *Ok*. You should now see a new entry in the main table for that clinician.



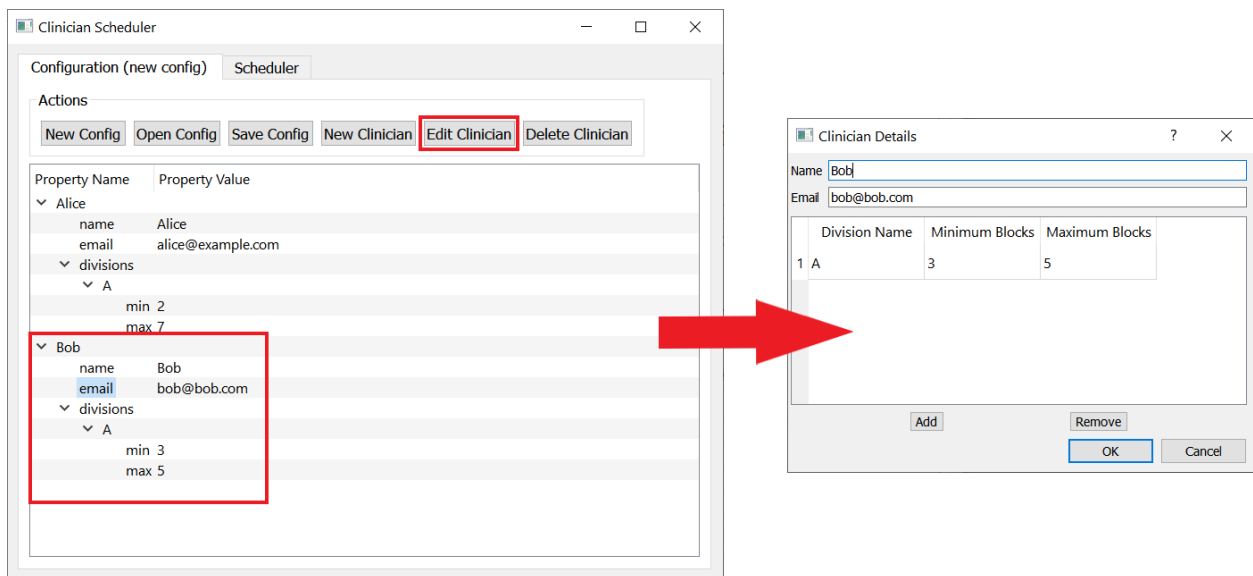
## 1.5 Deleting an existing clinician

To delete an existing clinician, simply select a row corresponding to the clinician in the table and click on *Delete Clinician*.



## 1.6 Editing an existing clinician

To edit the information of a clinician, select a row corresponding to the clinician in the table and click on *Edit Clinician*. You should see a dialog window where you can change the information. For more details on how to enter data in the edit dialog, see [Adding a new clinician](#).





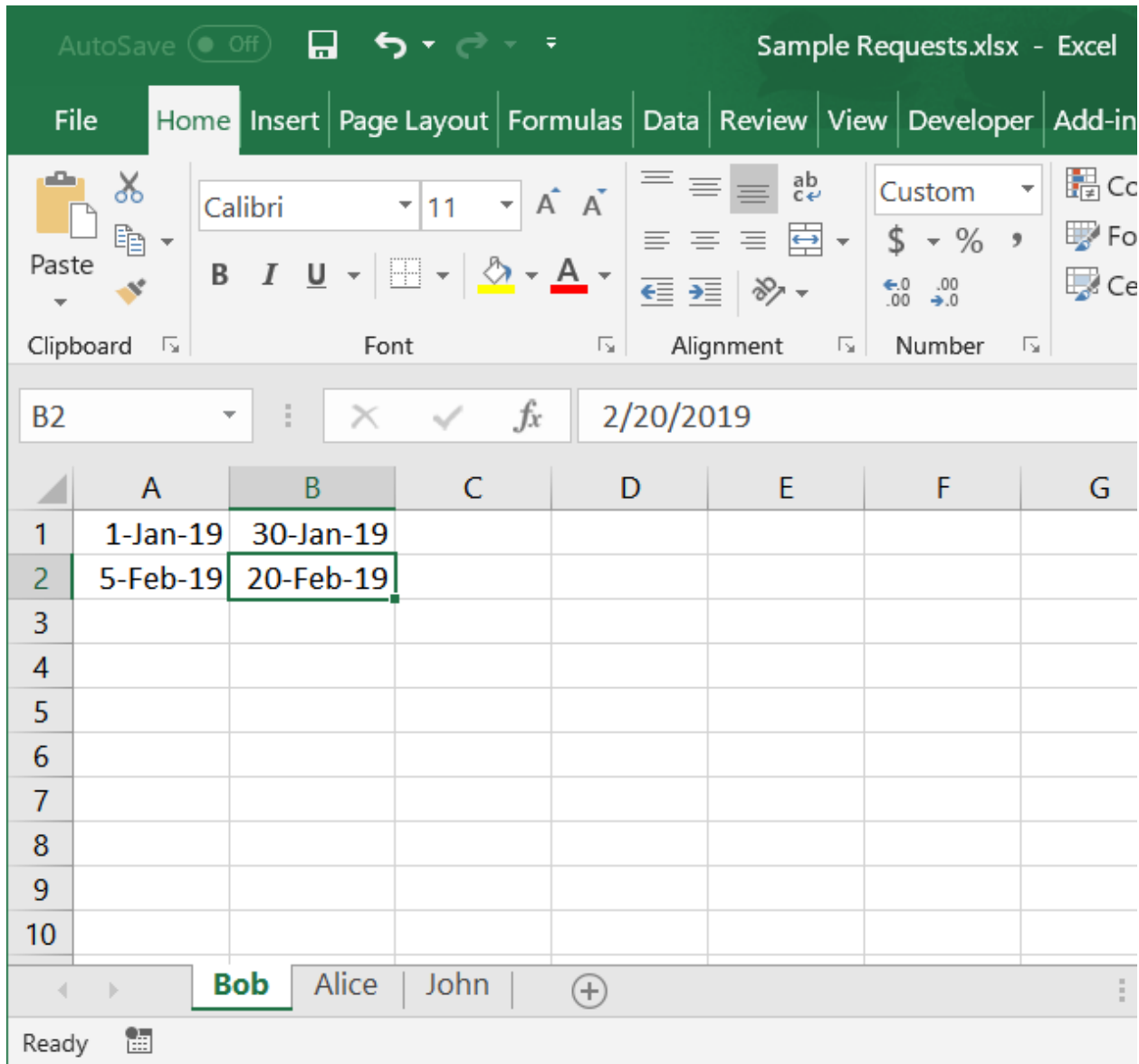
## REQUESTS & HOLIDAY WEEKENDS

Clinician requests for time-off and the dates of holiday weekends are supplied using a pair of excel files.

### 2.1 Clinician Requests Excel File

The requests file should have a single sheet per clinician that is in the configuration file you created in *Clinician Configuration*. Inside each sheet, each request is entered on a separate row, containing the start and end date (inclusive) of the request.

<b>Warning:</b> Make sure each value in the Excel file is formatted as a date!
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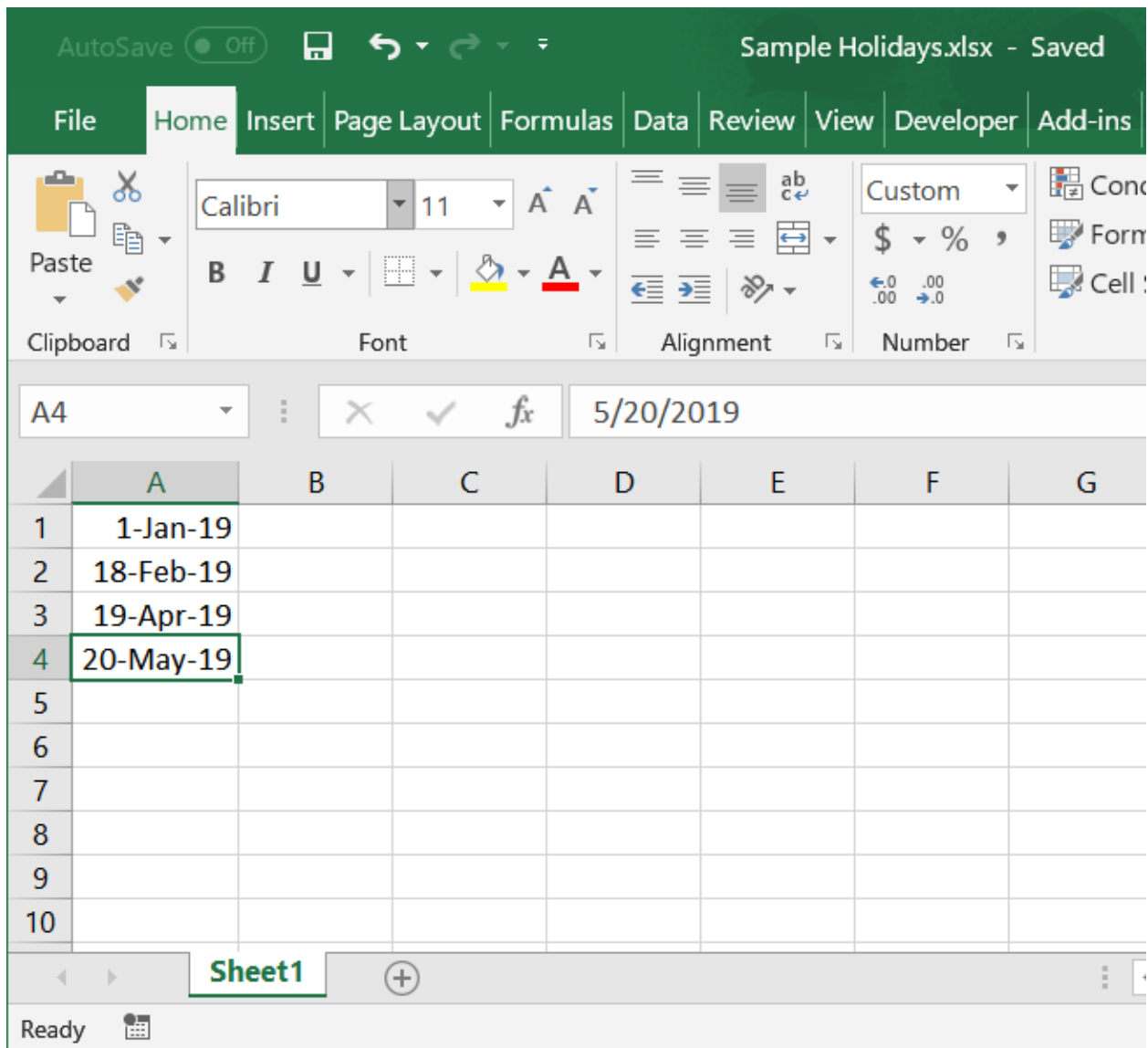


**Note:** To enter a request for a single day, use the same value for both start and end date.

## 2.2 Holiday Weekends Excel File

The holiday weekends file should have a single sheet with the dates of the holiday weekends, one in each row.

**Warning:** Make sure each value in the Excel file is formatted as a date!







## SCHEDULING

### 3.1 Generating a schedule

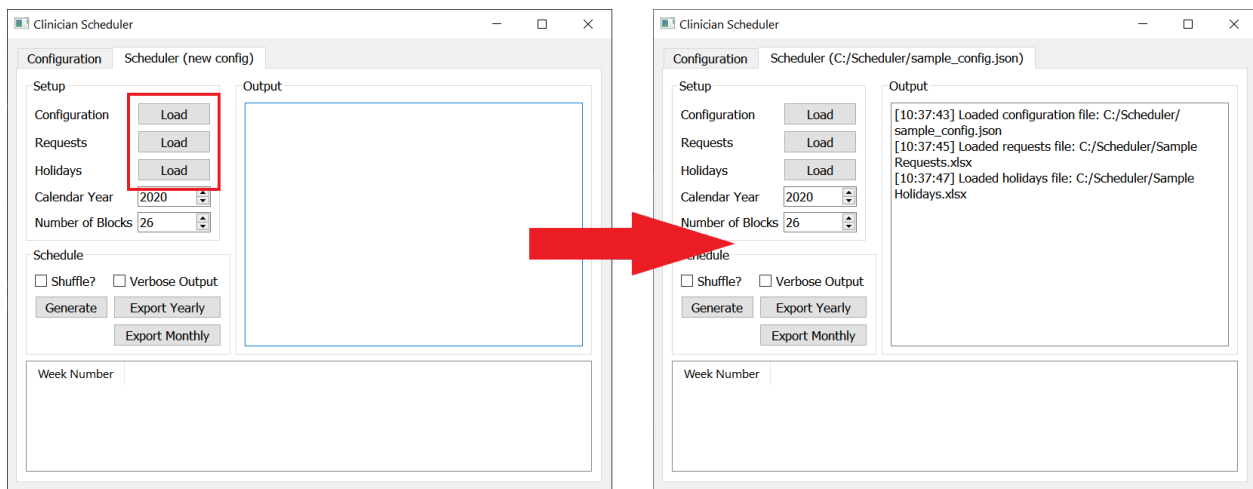
Once you have created a configuration file, you can switch over to the *Scheduler* tab of the application in order to generate a schedule.

1. Load the configuration, requests, and holidays files that you created earlier in *Clinician Configuration* and *Requests & Holiday Weekends*.

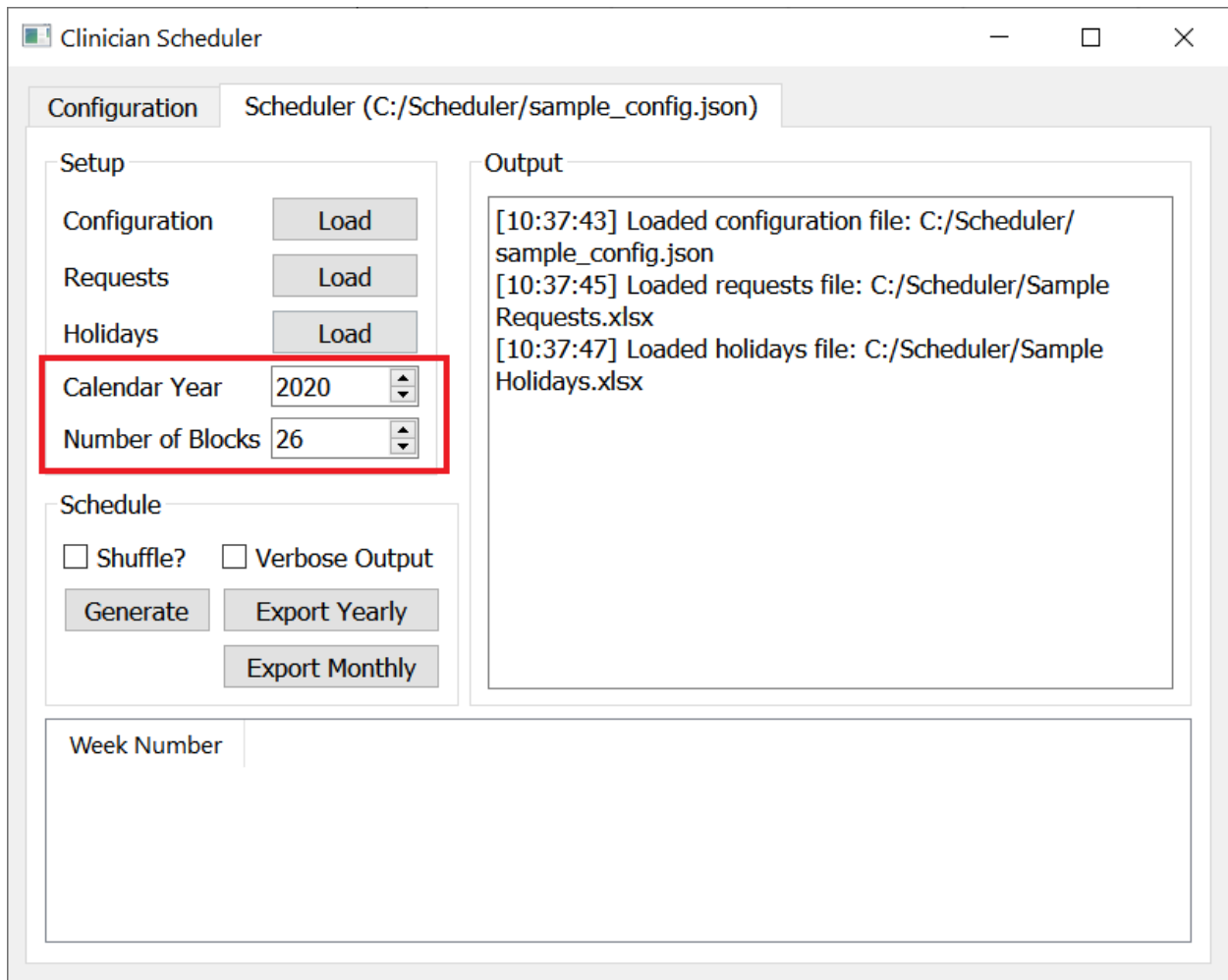
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**Note:** You can be sure that everything loaded correctly by checking the output on the right.

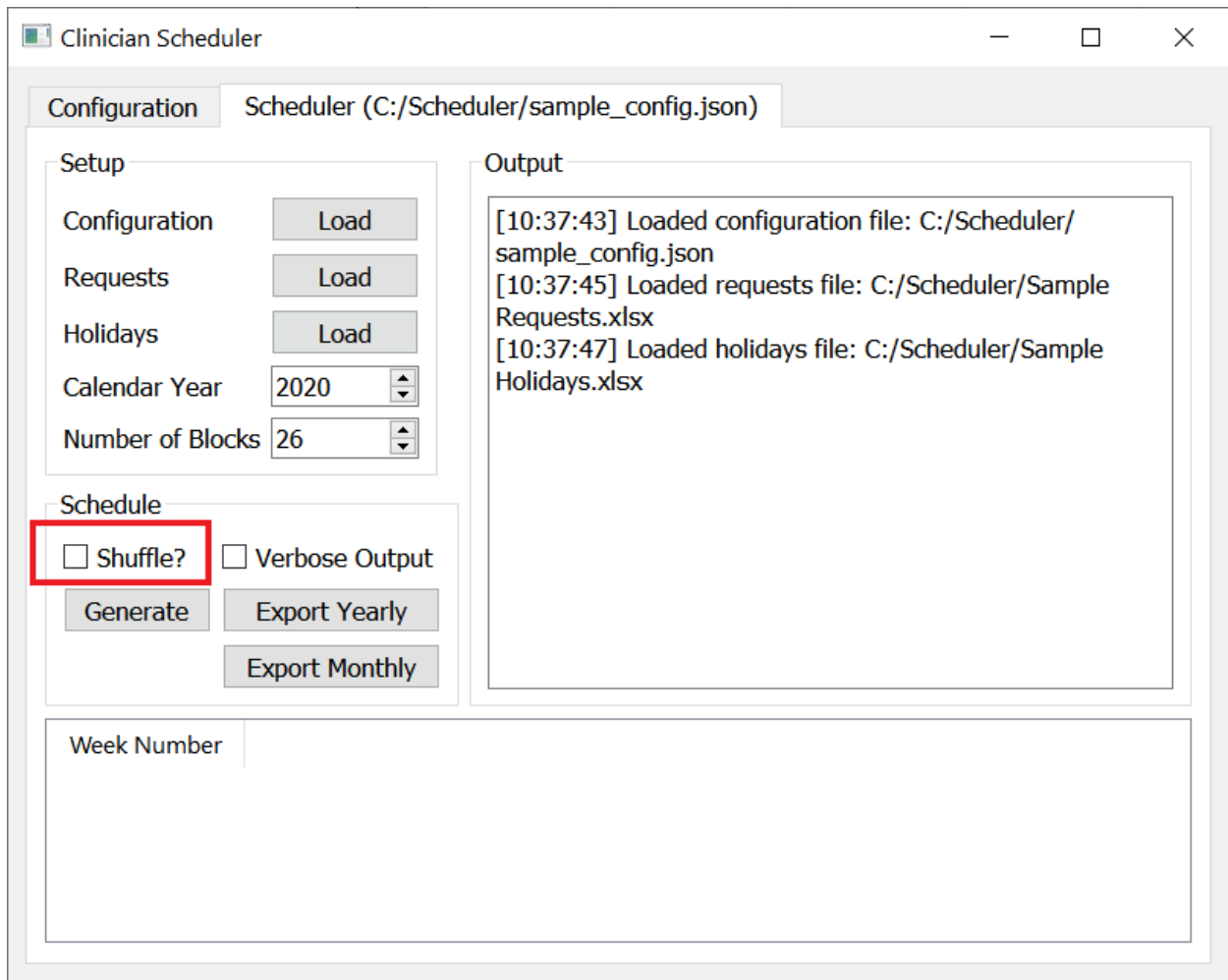
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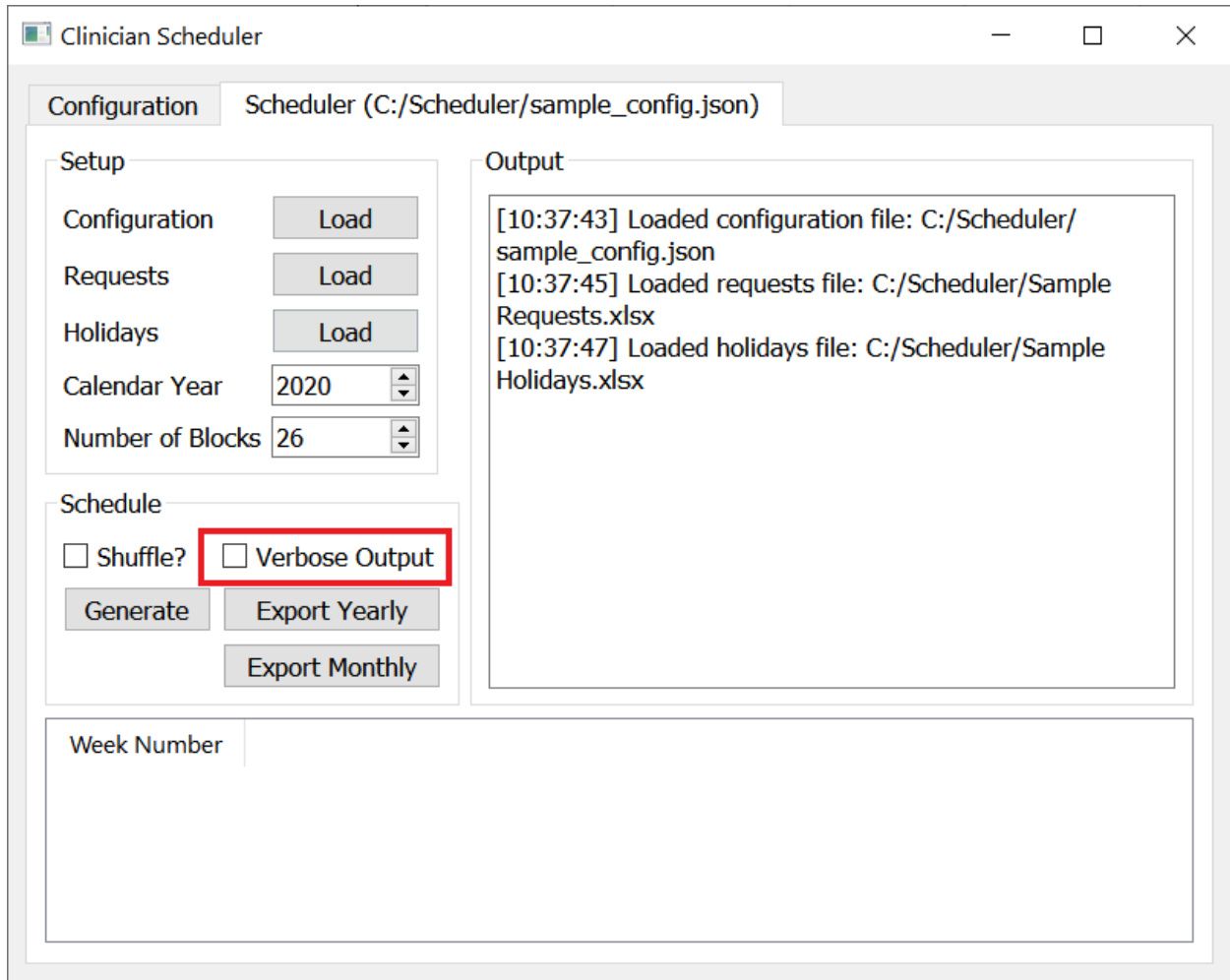
2. Set the starting calendar year for the schedule, as well as the number of 2-week blocks that you want the schedule to cover. By default, the calendar year is the upcoming year, and the number of blocks is 26, to cover a full year.



3. **(Optional)** Check the *Shuffle?* checkbox if you would like the scheduler to generate a slightly different schedule each time you click on *Generate*.

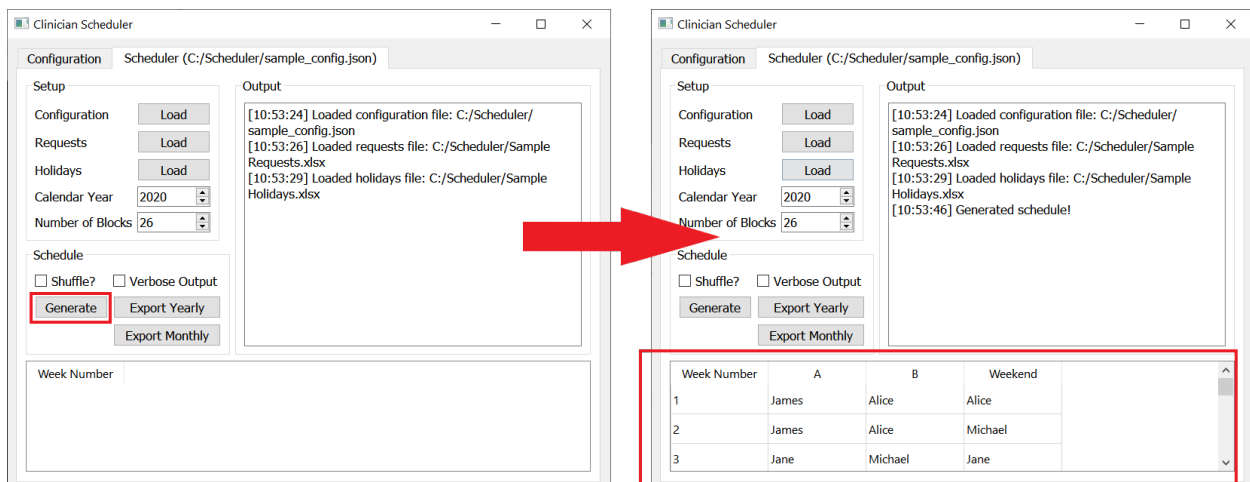


4. **(Optional)** Check the *Verbose Output* checkbox if you would like to see detailed output on the right after the scheduler finishes generating the schedule.



5. Click on *Generate* to generate a schedule.

**Warning:** Depending on the amount of clinicians and requests provided, it may take some time to find an optimal schedule.



**Warning:** It is possible that the scheduler will not be able to come up with a schedule that satisfies your constraints. This can be a result of either of the following reasons:

- There are not enough clinicians to distribute evenly throughout the year
- The minimum and maximum number of blocks of clinicians are too restrictive

Try changing the configuration file by adding new clinicians, or changing the min/max blocks of different clinicians to allow for more flexibility.

See [Clinician Configuration](#) for more information on modifying the configuration file.

## 3.2 Exporting a schedule

If you are satisfied with the generated schedule, you can choose to export it as an Excel file. There are two Excel format options: *Yearly Export* and *Monthly Export*.

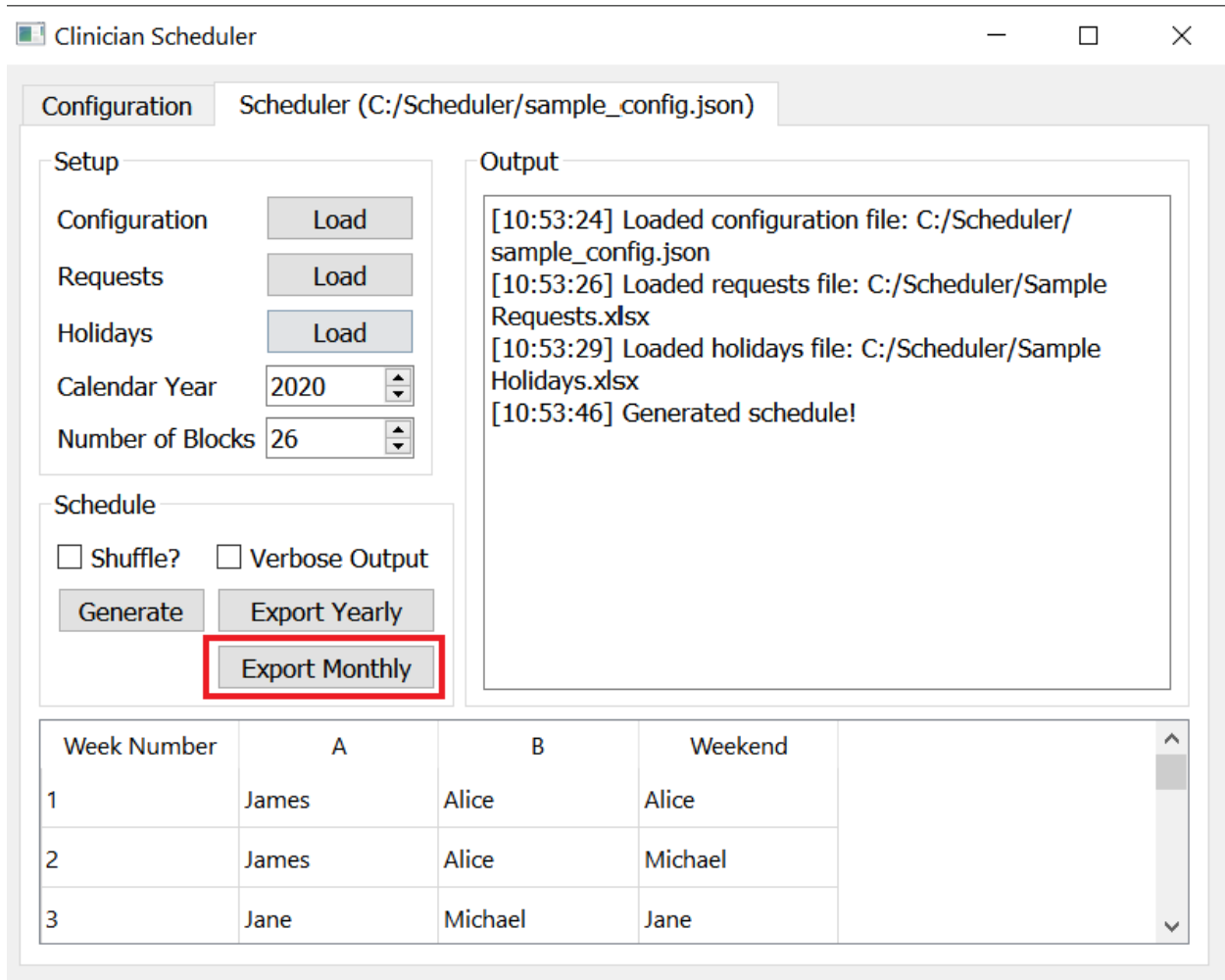
Selecting the *Yearly Export* option will generate an excel file with a single sheet, displaying the clinicians that are covering a particular division for a given week or weekend. It is very similar to the table output in the application itself.

The screenshot shows the 'Clinician Scheduler' application window. The 'Scheduler (C:/Scheduler/sample\_config.json)' tab is active. The 'Setup' section includes 'Configuration', 'Requests', and 'Holidays' (each with a 'Load' button), 'Calendar Year' (set to 2020), and 'Number of Blocks' (set to 26). The 'Schedule' section has checkboxes for 'Shuffle?' and 'Verbose Output', and buttons for 'Generate', 'Export Yearly' (highlighted with a red box), and 'Export Monthly'. The 'Output' section displays a log of events: '[10:53:24] Loaded configuration file: C:/Scheduler/sample\_config.json', '[10:53:26] Loaded requests file: C:/Scheduler/Sample Requests.xlsx', '[10:53:29] Loaded holidays file: C:/Scheduler/Sample Holidays.xlsx', and '[10:53:46] Generated schedule!'. At the bottom, a table shows the schedule for three weeks.

Week Number	A	B	Weekend
1	James	Alice	Alice
2	James	Alice	Michael
3	Jane	Michael	Jane

Selecting the *Monthly Export* option will generate a more detailed breakdown of the schedule, with a separate sheet

for every month, detailing which clinician covers which division on which day.



## CHAPTER FOUR

### SAMPLE OUTPUT

#### 4.1 Yearly Excel Format

Week Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Week Number	A	B	Weekend																	
2	1	Jane	Bob	Jane																	
3	2	Jane	Bob	Bob																	
4	3	Michael	Alice	Alice																	
5	4	Michael	Alice	Bob																	
6	5	Jane	Bob	Jane																	
7	6	Jane	Bob	Bob																	
8	7	Michael	Alice	Michael																	
9	8	Michael	Alice	Alice																	
10	9	Bob	Jane	Bob																	
11	10	Bob	Jane	Jane																	
12	11	Alice	Michael	Alice																	
13	12	Alice	Michael	Michael																	
14	13	Jane	Bob	Bob																	
15	14	Jane	Bob	Michael																	
16	15	Alice	Michael	Alice																	
17	16	Alice	Michael	Jane																	
18	17	Jane	Bob	Bob																	
19	18	Jane	Bob	Jane																	
20	19	Michael	Alice	Alice																	
21	20	Michael	Alice	Michael																	
22	21	Jane	Bob	Bob																	
23	22	Jane	Bob	Michael																	
24	23	Michael	Alice	Alice																	
25	24	Michael	Alice	Bob																	
26	25	Jane	Bob	Jane																	
27	26	Jane	Bob	Michael																	

## 4.2 Monthly Excel Format

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Date	Day	Fellow	0800 - 1700	1700 - 0800	Backup	0800 - 1700	1700 - 0800	Backup											
2	Dec-31	Mon	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
3	Jan-01	Tue	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
4	Jan-02	Wed	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
5	Jan-03	Thu	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
6	Jan-04	Fri	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
7	Jan-05	Sat	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
8	Jan-06	Sun	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
9	Jan-07	Mon	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
10	Jan-08	Tue	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
11	Jan-09	Wed	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
12	Jan-10	Thu	Jane	Jane	Bob	Bob	Bob	Bob	Jane											
13	Jan-11	Fri	Jane	Bob	Bob	Bob	Bob	Bob	Bob											
14	Jan-12	Sat	Bob	Bob	Bob	Bob	Bob	Bob	Bob											
15	Jan-13	Sun	Bob	Bob	Bob	Bob	Bob	Bob	Bob											
16	Jan-14	Mon	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
17	Jan-15	Tue	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
18	Jan-16	Wed	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
19	Jan-17	Thu	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
20	Jan-18	Fri	Michael	Alice	Alice	Alice	Alice	Alice	Alice											
21	Jan-19	Sat	Alice	Alice	Alice	Alice	Alice	Alice	Alice											
22	Jan-20	Sun	Alice	Alice	Alice	Alice	Alice	Alice	Alice											
23	Jan-21	Mon	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
24	Jan-22	Tue	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
25	Jan-23	Wed	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
26	Jan-24	Thu	Michael	Michael	Alice	Alice	Alice	Alice	Michael											
27	Jan-25	Fri	Michael	Michael	Alice	Alice	Alice	Alice	Michael											