

# BYU Tanner Building Room Reservation Export Tool

Final VBA Project

MBA 614

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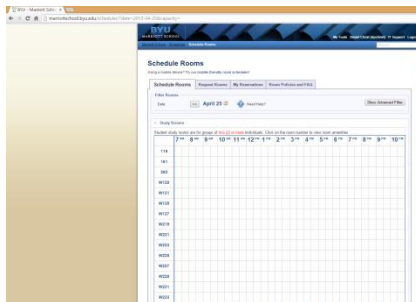
April 14, 2015

## EXECUTIVE SUMMARY

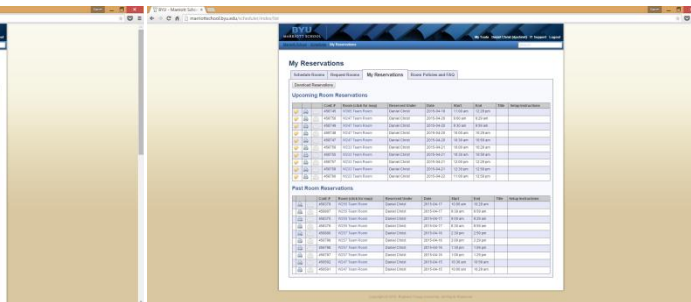
The “business” that my project focuses on is that of Me, Inc. but I plan to share this tool with my classmates and future BYU business students. The first year of my MBA at BYU is almost finished and one of the keys to being successful was working well with your various teams. This meant meeting frequently and this often occurred in one of the Tanner Building team study rooms. To use a study room, you must reserve it on the BYU Marriott School room scheduler web site (<http://marriottschool.byu.edu/scheduler>). To stay organized, I often would reserve a study room and then immediately create a Google Calendar event noting the room location, date, and length of time. As I looked back on this first year, I have booked nearly 300 room reservations and for each of those, I manually created a Google Calendar event. If I assume my teammates booked a similar amount, that’s another ~1,200 (~300 x 4) room reservations that were made over the past two semesters. We were all consistent in creating calendar events for each reservation. If we assume each event took approximately 90 seconds to create, that’s 135,000 seconds (1,500 x 90) or 2,250 minutes or 37.5 hours of time spent on simply creating Google Calendar events. Unfortunately, I cannot have this time back but if I created a tool to automate parts of this process, my second year of the MBA program would free up a substantial amount of time for me and my classmates.

The tool that I built allows me to compile all of my upcoming room reservations into a tidy CSV file that I can then easily upload into my Google Calendar. The outcome is having all of my study room reservations turned into individual calendar events that are cleanly placed into my Google Calendar. My tool is driven by a single button on a customized ribbon that quickly allows me to log into the My Reservations web site, extracts all necessary room reservation data from the web site, and then places all of the data into a CSV file that is then ready to be uploaded into Google Calendar. The Web Query information is cleared after the macro runs so it’s ready for its next batch.

Room Scheduler



My Reservations



## INTRODUCTION

As an MBA student at BYU, I spend a lot of time in the Tanner Building team study rooms. I often schedule a room through the Marriott School room scheduler web site and then manually create a Google Calendar event with the necessary room reservation information. A large portion of my life relies on being as organized as possible through my Google Calendar. It tells me where I need to be and when I need to be there. On my iPhone, I can quickly pull up where my next meeting is with full confidence that the information on my phone screen is correct. This is why I feel the need to create individual Google Calendar events showing where my rooms are and when they are booked.

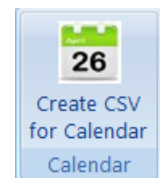
As of this writing, I have made 289 room reservations since September 2, 2014. That's 289 reservations booked on the Marriott School web site and consequently, 289 calendar events **manually** created in my Google Calendar. I sought out a way to use VBA to automate the process of creating Google Calendar events that mirrored the study rooms that I booked in the Tanner Building. The tool ended up not being what I initially expected it to be but I am proud of the end product. I believe that it will save me a lot of time in my 2<sup>nd</sup> year at BYU. Additionally, I hope that it can be used by my fellow classmates and even improved upon in the future.

## IMPLEMENTATION

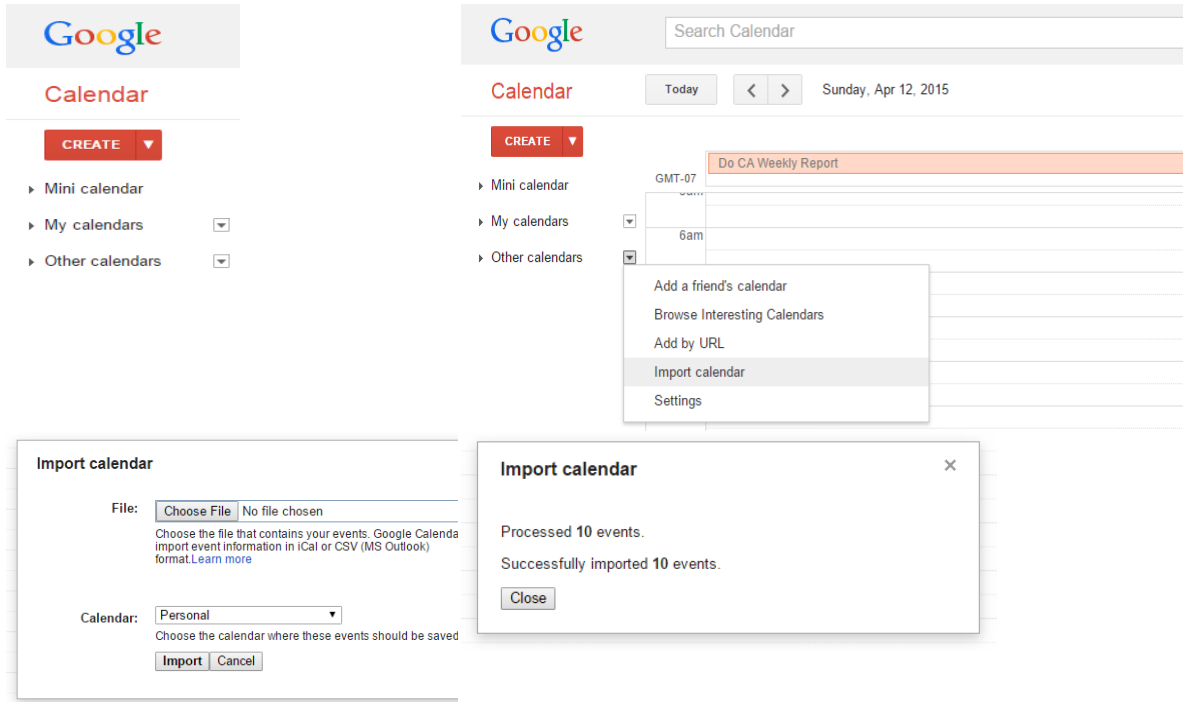
These are the components that make up my solution:

- Internet login functionality to access my list of Room Reservations (<http://marriottschool.byu.edu/scheduler/index/list>) – the user is prompted to login with their BYU net ID and password.
  - I used information from login2 from the IE\_logins\_w\_15\_a Excel file on Learning Suite.
- A web query that grabs room data from the above URL and puts it into the second worksheet “WebQuery”.
  - This step was started by just recording a Macro of me pulling in external data from the web.
- Functionality that moves the necessary reservation data into the first worksheet “calendarCSV” and then moves the worksheet into a new workbook. This workbook is then saved in the same file folder path as the finalProject Excel file. The default file name is calCSV.csv.
  - If you run the tool again, it will save over the previous calCSV.csv file.
  - The CSV file is carefully crafted with the headers Subject, Start Date, Start Time, etc. because that is how Google accepts imported CSV files.
  - The data was copied and pasted column by column under the necessary column headers. It was important here to change the code so the worksheets were hardcoded and not referred to as Next and Previous.
  - Another important step here was to make sure the data selected was only room data. I used xIDown to choose all of the rooms but included an if statement that would only be necessary when there was just one upcoming reservation. xIDown would give me issues because it would choose the single reservation and then jump down to the next set of data which was previous reservations. The if statements solved that issue.
- The data from the worksheets “calendarCSV” and “WebQuery” is cleared so the tool is ready to run its next export.
- A custom ribbon button was created in a new group named Calendar. The button is labeled “Create CSV for Calendar”.
  - I used materials from the custom ribbon class session and Learning Suite to create my button.
- To import the calCSV file into Google Calendar you must log into Google Calendar and then click on the down arrow next to “Other Calendars” then click on “Import Calendar”. From there, you just choose the

	A	B	C	D	E
1	Subject	Start Date	Start Time	End Date	End Time
2	W365 Team Room	4/18/2015	11:00 AM	4/18/2015	12:29 PM
3	W247 Team Room	4/20/2015	9:00 AM	4/20/2015	9:29 AM
4	W247 Team Room	4/20/2015	9:30 AM	4/20/2015	9:59 AM
5	W247 Team Room	4/20/2015	10:00 AM	4/20/2015	10:29 AM
6	W247 Team Room	4/20/2015	10:30 AM	4/20/2015	10:59 AM
7	W233 Team Room	4/21/2015	10:00 AM	4/21/2015	10:29 AM
8	W233 Team Room	4/21/2015	10:30 AM	4/21/2015	10:59 AM
9	W233 Team Room	4/21/2015	12:00 PM	4/21/2015	12:29 PM
10	W233 Team Room	4/21/2015	12:30 PM	4/21/2015	12:59 PM
11	W223 Team Room	4/22/2015	11:00 AM	4/22/2015	12:59 PM



CSV file and click on “Import”. You will receive a status message showing how many events were imported. If you page through your Google Calendar, all of your items from the CSV file should now be there.



**LEARNING POINTS**

I learned that nearly all of Google’s products would require advanced coding knowledge outside of VBA to properly interact. I originally set out to fully automate the process but learned that this could not all be completed in VBA. I learned that CSV files can be uploaded into Google Calendar to create large sets of events. This is what inspired me to create a tool that compiled my upcoming reservations into a CSV file. While my process is not 100% automated, it will save me a large amount of time going forward with my MBA. One issue I noticed was when I would log in to the Reservations site, I would have to click on the “Sign In” button twice. Another issue was that sometimes the data would not pull at all and I would have to establish a Web Query connection in Excel before clicking the “Create CSV for Calendar” button.

**Assistance**

I used resources through internet searches and course materials but did not receive substantial help from another person. I regret not reaching out to my professor or TAs to make this project even stronger.