

# Schedul-EZ: A Tool For Scheduling Faculty, Rooms and Courses

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## ABSTRACT

Schedul-EZ is a tool that has been developed to assist chairs and secretaries of various departments to facilitate faculty scheduling with a click of a button. Currently, no tool exist in the marketplace to specifically address this tedious, mundane, time consuming and error prone task. Schedul-EZ is a powerful database driven tool that was created with simplicity and specifics in mind. Chairs of departments now have the capability to schedule faculty, rooms and courses for unlimited number of semesters.

The use of this tool requires no training. Scheduling can be created for universities that use either the semester or quarter system.

Schedul-EZ, screenshots and the user documentation are available at <http://www.nwmissouri.edu/~sri/schedulez.htm>

## Categories and Subject Descriptors

D.1.1 Applicative Functional Programming

D.2.2 [Languages]: Language Constructs and Features – *Visual Basic*

## General Terms

Management, Languages

## Keywords

Scheduling, Automation.

## 1. INTRODUCTION

After being briefly involved in the process of scheduling faculty with classes and courses, we observed that the entire process of scheduling faculty with classes and rooms could easily become automated. This paper introduces Schedul-EZ, a tool that greatly assists chairs of departments and secretaries to master this mundane, error prone and time consuming task.

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This software is currently being used by various departments at Northwest Missouri State University and has been proven to be an effective tool for chairs of departments and secretaries.

## 2. Design

The GUI interface had to be kept as simple as possible. The GUI interface consists of a single window with multiple tabs that allows the user to move from one window to another. While the program was being developed, various changes had to be quickly incorporated to keep everything as straightforward as possible but at the same time, allowing the user the full capability to schedule with ease. The program had to be written with dynamics in mind as to allow other departments other than the initial intended use of the Computer Science Department at Northwest Missouri State University. The program was written entirely in Visual Basic with MS-Access as the database and export capabilities to MS-Excel.

## 3. Schedul-EZ

This software assists in the scheduling of faculty, courses and rooms for future semesters, as scheduling requires. The end user has the ability to save and retrieve information as needed. There are three main components to this program. The control panel allows the end user to customize the software to their specific needs. The daily schedule allows the end user to schedule faculty to courses and rooms. The entire week view allows the end user to view the schedule at its entirety with the ability to sort by room or faculty name and export it to a spreadsheet.

### 3.1 Control Panel

This screen allows the user to customize the program to suit a department's need. Department faculty names, classrooms and courses offered are stored in the program. This customization will personalize the program for ease of use later on when the user begins scheduling. The user also has the option to create new semesters as the need arises. For example, if the need to schedule for Fall 2004 arises, the user merely has to create a new semester called "Fall2004". The user then restarts the program and can begin to schedule for the fall of 2004.

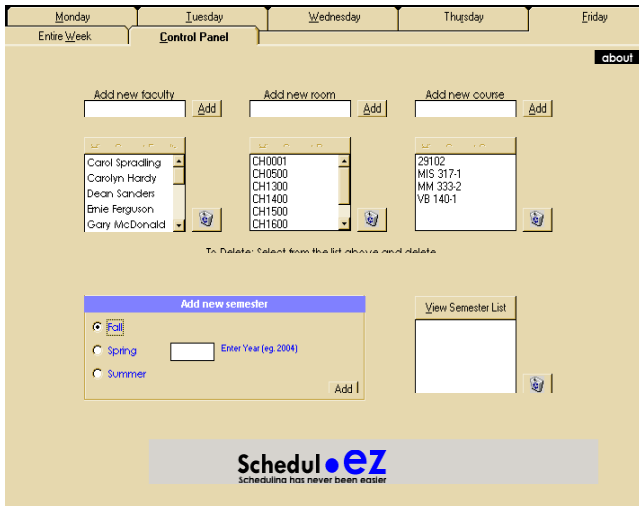


Figure 1 – The Control Panel View

### 3.2 Daily Schedule

This is the main part of the program. The user after having done the one time customization process in the control panel, will then proceed to schedule for the semester that they have chosen. Here, the faculty names, courses offered by the department and the room locations appear in a drop down menu. The end user merely has to click the faculty name, course and room location from the drop down menu to the applicable time that one is scheduled to teach at. An interesting feature that is available here is the validate button. After scheduling is complete, the validate button will check to see if a scheduling conflict exists. If a conflict does exist, it will notify the exact time and location of the conflict. This

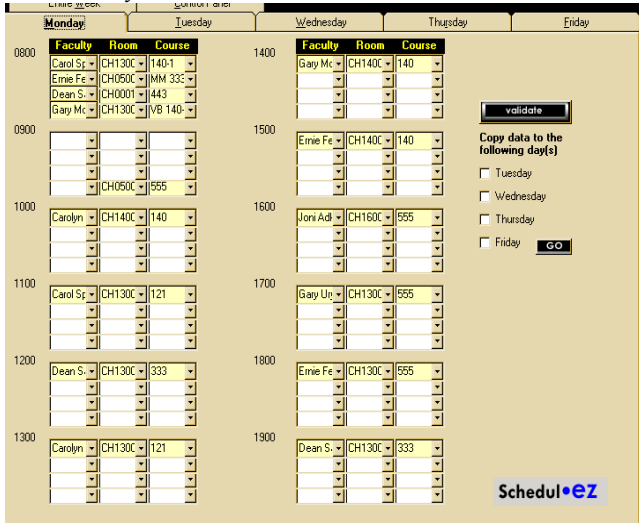


Figure 2 – Daily Schedule View

### 3.3 Entire Week / Export View

After a semester scheduling has been completed, the user can now view the entirety of the schedule by clicking on this view. Here, the user can sort the results by faculty or by room. This view also assists in last minute changes in a schedule. Finally the user can choose to export the results to a spreadsheet for distribution to other faculty members.

## 4. Perceived Benefits

We have observed the sheer joy on the faces of secretaries when introducing this program to them. The pains of scheduling has greatly been reduced in the following areas: The possibility to create a scheduling conflict and detection of it, The amount of time and effort it takes to actually begin the scheduling process and see it through till the end, and the usage of paper. This program is database driven; therefore it can store all the data from unlimited number of semesters, which greatly reduces the need to keep a hardcopy of any schedules.

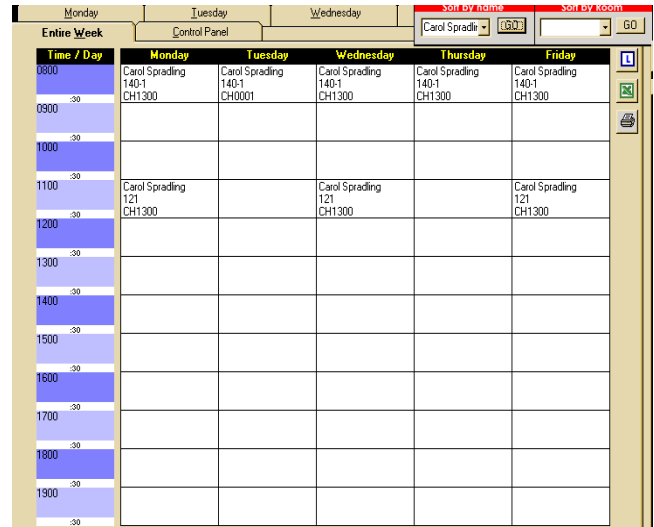


Figure 3 – The Entire Week View

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	MONDAY			TUESDAY			WEDNESDAY			THURSDAY			
2	Faculty	Room	Course	Faculty	Room	Course	Faculty	Room	Course	Faculty	Room	Course	
3	9am	Carol Spradling	CH1300	MM 333-2	Carol Spradling	CH4000	MM 333-2	Carol Spradling	CH1300	MM 333-2	Carol Spradling	CH1300	MM 333-2
4	b	Dean Sanders	CH0001	443	Dean Sanders	CH1300	443	Dean Sanders	CH0001	443	Dean Sanders	CH1300	443
5	b	Gay McDonald	CH1300	VB 140-1				Gay McDonald	CH1600	VB 140-1			
7	9am												
8	9												
9	9												
10	10	Carolyn Hardy	CH1400	140				Carolyn Hardy	CH1400	140			
11	10am												
12	1												
13	1												
14	1												
15	11am	Carol Spradling	CH1300	121				Carol Spradling	CH1300	121			
16	1b												
17	1												
18	12pm	Dean Sanders	CH1300	333				Dean Sanders	CH1300	333			
19	1												
20	1												
21	1												
22	1	Carolyn Hardy	CH1300	121				Carolyn Hardy	CH1300	121			
23	1												
24	2												
25	2pm	Gay McDonald	CH1400	140				Gay McDonald	CH1400	140			
26	2												
27	2												
28	2												
29	2												
30	2												
31	3pm	Ernie Ferguson	CH1400	140				Ernie Ferguson	CH1400	140			
32	3												
33	3												
34	3												
35	4pm	Joni Adkins	CH1600	555				Joni Adkins	CH1600	555			

Figure 4 – Spreadsheet View

## 5. ACKNOWLEDGMENTS

Our thanks to VisualBasicForum.com for their guidance in solving some major programming hurdles when we hit a brick wall.

## 6. REFERENCES

- [1] Connell, J., Visual Basic 6 Database Programming. WROX Press, Birmingham, UK, 2001