

Executive Summary

I own a business back in Wyoming called Cowboy Donuts. Cowboy Donuts is a scratch bakery that has 11 employees and over 50% of its costs are contributed to labor costs. Cowboy Donuts biggest issue is managing those labor costs. We have a scheduler in excel, but this lacks a way to add up cost of said schedule and also people often complain of losing the schedule so they will often show up to work late or prior to their scheduled work times.

I have increased the functionality of the current scheduler by enabling it to receive input from the manager with regards to how much money they want to spend on wages during the next two weeks. Also, once the schedule is approved by a manager, they can disperse the schedule electronically to all of the employees by the simple click of a button.

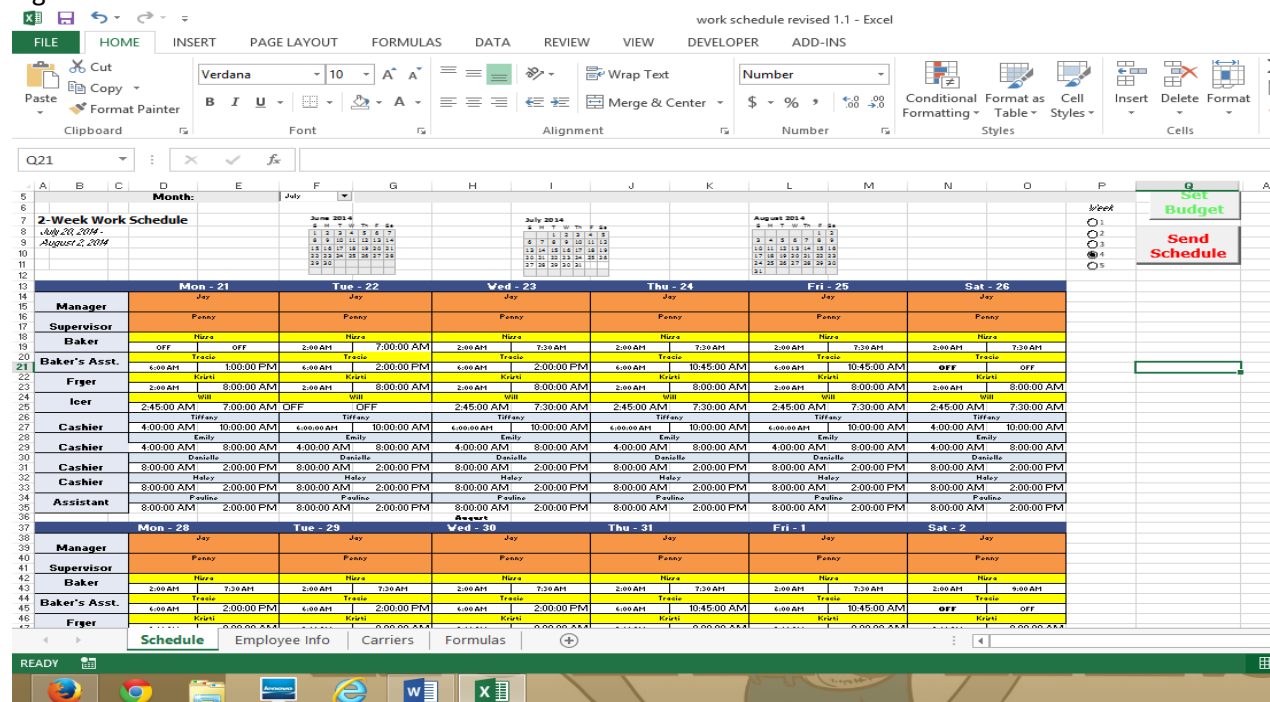
Implementation Documentation

There are two main goals of this project.

- 1- Help managers to set schedules that are in-line with budget constraints.
- 2- Help employees to have easier access to their work schedules.

To accomplish goal #1, I first needed to total up each individuals weekly hours from the following schedule (see fig. 1)

Fig. 1



After totaling each employee's 2 week hours, I was able to put them into a sheet that would calculate each employee's estimated 2 week cost, based on their current rate of pay.(see fig. 2)

Fig. 2

work schedule revised 1.1 - Excel

Employee Information									
Emp. #	Name	Position	Rate/Hr.	2 Wk Hrs	2 week pay	Phone #	Carrier	Carrier code	Email
1	Jay	M	-	0.00		3078710570	Verizon	vtext.com	derekjohnson112@gmail.com
2	Penny	M	-	0.00		3078710571	Verizon	vtext.com	derekjohnson113@gmail.com
3	Nissa	E	\$ 10.00	61.50	\$ 615.00	3078710572	Verizon	vtext.com	derekjohnson112@gmail.com
4	Tracie	E	\$ 10.50	66.00	\$ 693.00	3078710573	Verizon	vtext.com	derekjohnson113@gmail.com
5	Kristi	E	\$ 9.00	72.00	\$ 648.00	3078710574	Verizon	vtext.com	derekjohnson112@gmail.com
6	Will	E	\$ 9.00	51.75	\$ 465.75	3078710575	Verizon	vtext.com	derekjohnson113@gmail.com
7	Tiffany	E	\$ 9.50	56.00	\$ 532.00	3078710576	Verizon	vtext.com	derekjohnson112@gmail.com
8	Emily	E	\$ 9.50	48.00	\$ 456.00	3078710577	Verizon	vtext.com	derekjohnson113@gmail.com
9	Danielle	E	\$ 9.00	72.00	\$ 648.00	3078710578	Verizon	vtext.com	derekjohnson112@gmail.com
10	Haley	E	\$ 8.00	72.00	\$ 576.00	3078710579	Verizon	vtext.com	derekjohnson113@gmail.com
11	Pauline	E	\$ 11.00	72.00	\$ 792.00	3078710580	verizon	vtext.com	derekjohnson112@gmail.com
2 Week Budget									OFF
\$ 4,850.00									0.00
M = Manager (send full schedule)									0.04
E = Employee (send partial schedule)									0.05
2 Week Actual									0.06
\$ 5,425.75									

After calculating the cost of each employee under the current schedule, I then wrote some code that would accept the manager's 2 week budget and return how much the current schedule was over in dollars(\$) or by how much it was under budget. (see code 1.)

Code 1.

```

Sub setBudget()

Dim g As Integer
Dim a As Integer
Dim OutPut As Integer
Dim s As Integer
Dim m As Integer

    Budget = InputBox("Please set your 2 week budget", "Set Budget")
    ThisWorkbook.Sheets("Employee Info").Range("b17").Value = Budget

    g = ThisWorkbook.Sheets("Employee Info").Range("b17").Value
    a = ThisWorkbook.Sheets("Employee Info").Range("b20").Value

    s = g - a
    m = a - g

    If g > a Then
        OutPut = MsgBox("You are $" & (s) & " under budget!", vbInformation, "Congratulations!")
    Else
        OutPut = MsgBox("Sorry you are $" & (a) & " over budget.", vbInformation, "Hey just so you know")
    End If
End Sub

```

At this point in the project, I was ready to move onto goal #2, the distribution of the schedule to employees. I began to experience some difficulties at this point with the current formatting of the times. After much headache, I was able to talk with someone, who then explained to me that the times

shown in excel are actually numbers that are formatted to appear as times. Taking this knowledge, I was then able to adjust the schedule that the VBA sub was working with, and concatenate (&) the proper ending to each "number." The ending code appears as follows (Code 2.)

Code 2.

```
Dim un As String
Dim pw As String

Sub sendReminders()
Dim r As Long
Dim theRow As Integer
Dim c As Integer
Dim x As Integer
Dim people As Variant
Dim name As String
Dim isManager As Boolean
Dim email As String
Dim phone As String
Dim carrier As String
Dim carrierCode As String

Dim day(11) As Variant
Dim days(11) As Variant
Dim daye(11) As Variant

frmLogin1.Show

If frmLogin1.txtPassword.Value = "" Or frmLogin1.txtUsername.Value = "" Then
Exit Sub
End If
'now I know that I have username and a password
un = frmLogin1.txtUsername.Value
pw = frmLogin1.txtPassword.Value

r = 6 ' this is the row you want to start on in the sheet 3 employee info tab
c = 18
Do Until Sheets("Employee Info").Cells(r, 1).Value = ""
name = Sheet3.Cells(r, 2).Value
isManager = Sheet3.Cells(r, 3).Value = "M"
phone = Sheet3.Cells(r, 7).Value
carrier = Sheet3.Cells(r, 8).Value
carrierCode = Sheet3.Cells(r, 9).Value
email = Sheet3.Cells(r, 10).Value
x = 0
theRow = 3
Do Until Sheets("Employee Info").Cells(theRow, c) = ""
Sheets("Employee Info").Cells(theRow, c).NumberFormat = "[$-F400]h:mm:ss AM/PM"
day(x) = Sheets("Employee Info").Cells(theRow, c).Value
Sheets("Employee Info").Cells(theRow, c + 1).NumberFormat = "[$-F400]h:mm:ss AM/PM"
days(x) = Sheets("Employee Info").Cells(theRow, c + 1).Value
Sheets("Employee Info").Cells(theRow, c + 2).NumberFormat = "[$-F400]h:mm:ss AM/PM"
daye(x) = Sheets("Employee Info").Cells(theRow, c + 2).Value
Debug.Print phone & "@" & carrierCode, un & "@gmail.com", pw, name, day(x) & " Start at " & days(x) & " and end at " & daye(x)

x = x + 1
theRow = theRow + 1
Loop

r = r + 1
c = c + 3
Loop
End Sub
```

This code, along with a little other module that enabled Gmail to be opened and send text-via-email, is what was required to achieve my desired result of giving easy access of their schedule to all the employees. This also eliminates excuses from employees that they often give about not knowing when they were supposed to come into work. I had a blast doing this project and look forward to implementing it immediately to start increasing manager awareness, saving costs, and reducing excuses.

Difficulties Encountered

The single biggest issue that was faced was the formatting of the time numbers. I must have tried 20 different approaches to manipulating the past format. After a short lesson from my neighbor, who uses excel frequently in his work, I understood that the time was simply a number (ie. 1:45 a.m. = 0.0729167). I was then able to continue and work a solution that would help to convert what “looks” like the right number into the right number that wanted to play nice with my other code.

Assistance

The only assistance I received, was with respect to understanding how to format time and number formats in excel work. I was then able to manipulate them such that my output was in a format that could be understood by the employee that was receiving the schedule