Assignment: Student's Time Tracking System – Course-Long Project

Due on Elearning Deadline | Engr Area: time Management | Value: 50

General Instructions: You are required to submit one MS Excel workbook of spreadsheets holding the solution for this assignment. You must follow the general spreadsheet assignment submission format described in another document. The general assignment assignment submission format document describes organizing your worksheet, where to place identifying information, required notes, etc.

Purpose: 1) Give you a valuable tool that you can use throughout your college career to monitor the time you spend on various tasks. 2) Force you to use a workbook with multiple spreadsheet pages. 3) Offer an opportunity to design a solution for a somewhat complex problem. 4) Allow you to experience conditional formatting and conditional counting. 5) Present opportunities to apply graphical representations of some of your data.

Grading: You will be graded on the following criteria: (1) correct answers, (2) ease of understanding, (3) ease of use, and (4) workbook and spreadsheet organization.

Background
One of the biggest differences between high school and college is for a student to become self-disciplined in time management. You are responsible for selecting and scheduling classes, for deciding what to study and when, to manage meals, transportation, recreation, and other aspects of your life. For this project your will create a workbook that contains a number of spreadsheets that help your plan and monitor how you spend your time.

Organization
Create a workbook with several spreadsheets. The first spreadsheet in your workbook will contain setup and summary information. Next, create one spreadsheet for each week during this class, i.e., four or five weeks. (You should be able to easily generalize these spreadsheets to track your time throughout an entire semester, but that is not a requirement for this project.) The last spreadsheet in your workbook will contain summary information gathered from the the first spreadsheet and each of the weekly time sheets. The summary sheet will also contain some graphs based on the accumulated weekly data.

Before designing the first sheet, design a weekly sheet. This will allow you to think about what information a weekly sheet might need (from the first sheet), what data a weekly sheet will collect, and what data it will supply to the summary sheet.

The organization of each weekly spreadsheet will be identical except for the week numbers, dates and the actual tasks you schedule for the particular week. Please include your name, the starting date and ending date for the week being described, a week number (i.e., Week 1, Week 2, etc.), and a table containing the names of the days of the week on one axis and the time intervals of regular time slots on the other axis. You
should organize your week by starting on Sunday and ending on Saturday. Select time intervals that make it easy for you to track your time during your waking hours, e.g., 7:00 a.m. until midnight. The instructor recommends a task interval of 30 minutes, e.g., 7:00 a.m., 7:30 a.m., 8:00 a.m., 8:30 a.m., etc. because a table that size should fit on a single printed page.

To help make it easier to record your tasks and track them, you should use the following tasks/categories:

<table>
<thead>
<tr>
<th>Tasks/Categories</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Represents a class or lab that you are scheduled to attend as a result of your registration this semester. Thus, CS1021 (both lecture and lab), MATH 1220, PHYS2050, PHYS2060 would be entered using the category name &quot;Class&quot;.</td>
</tr>
<tr>
<td>Job</td>
<td>Represents a work commitment, either for pay or for charity work.</td>
</tr>
<tr>
<td>Meal</td>
<td>Represents breakfast, lunch, dinner, and snacks that are informal or taken in a cafeteria, fast food shop, or restaurant.</td>
</tr>
<tr>
<td>Relax</td>
<td>Represents relaxation where that is your primary objective. Thus chatting with friends over lunch would be recorded as a &quot;Meal&quot;. Reading a book for fun, attending a movie, watching a DVD, going to a sporting event, working out, or just day dreaming would be recorded as &quot;Relax&quot;.</td>
</tr>
<tr>
<td>Shop</td>
<td>Represents shopping for various things like food, clothes, theater tickets, school supplies, CD's, etc. Although you may find it relaxing to shop, please record the activity as &quot;Shop&quot; rather than &quot;Relax&quot;.</td>
</tr>
<tr>
<td>Sleep</td>
<td>Represents the obvious. You were sleeping. Sleeping includes naps.</td>
</tr>
<tr>
<td>Study</td>
<td>Represents times when you are trying to study or supposed to be studying, even if you may be listening to the radio, watching TV, etc.</td>
</tr>
<tr>
<td>Travel</td>
<td>Represents time you spend on busses, driving in a car, etc. It also represents time when you travel by foot for significant distances, e.g., between classes that are in different buildings, walking to your dorm/housing, etc.</td>
</tr>
</tbody>
</table>

Any cell within your weekly schedule that will not contain one of the tasks listed above is considered “Free”. Leave empty cells blank. Do NOT mark them as “Free”.

Your project must record time for at least four different kinds of tasks or categories in your weekly spreadsheets. You must still calculate time for all of the tasks described in the table.

Use only the task names shown in our table. Do not include other detail. For instance, when you enter a schedule for your classes, use the word “Class”. Do not use “CS1021” or “MATH1700”, etc. Using only the task names found in the table will keep your task-
time tables simple and small and easier for you to design. You will be counting how much time you spend doing each type of task.

Each spreadsheet, i.e., each weekly spreadsheet and the cumulative spreadsheet must be designed to automatically answer the following questions:

1. How much free, i.e., unscheduled (i.e., free) time do you have during traditional school hours, i.e., between 8 am and 5 pm on weekdays?
2. How much time do you spend taking classes each week?
3. How much time do you spend studying each week?
4. How much time do you spend traveling each week?
5. How much time do you spend eating each week?
6. How much time do you spend relaxing each week?
7. How much time do you spend shopping each week?
8. How much time do you spend working at another job each week? (Working at your education is your primary job.)
9. How much time do you spend on all tasks, except sleeping each week?
10. How much time do you spend sleeping? (Assume sleep between midnight and 7:00 a.m. as well as any time you schedule sleep during a day.)

* Not actual time, but time measured in the time units you use in your table. For instance, if you use 30 minute increments, a typical 50 minute class will be allocated 60 minutes of time, i.e., you will enter the task “class” in two consecutive cells.

Your spreadsheets must also compute the percentage of time each activity takes from a week. Percentages would be based on a 7 day week with 24 hours in each day. Each spreadsheet should record the answers to the questions being asked and automatically generate the answers in hours and decimal fractions of hours, e.g., 16 hours spent in class this week or 15.75 hours spent eating meals this week, 9.5% of the week spent taking classes, etc.

Each time you update a weekly spreadsheet by adding or removing tasks from the time-task table part of a spreadsheet, your spreadsheet must recompute total task time and percentages for the week. Cumulative information on the summary spreadsheet must also be updated automatically whenever you change information on any weekly spreadsheet.

Finally, the summary sheet must contain two nicely designed pie charts that contains one slice for each of the tasks you are tracking with one extra slice for unaccounted time. Your pie charts must be readable and very easy to understand. One chart tracks time for the entire week, i.e., 7x24. The other chart tracks time only during weekday (Monday through Friday) hours between 7 am and midnight. The summary sheet must also accumulate data from each of the weekly spreadsheets as data is entered into them. The summary sheet will also be a place where a user enters data that will flow into or will be used to compute information on the weekly time sheets.
Assignment Inputs

The user of your spreadsheets must be able to enter identifying information including the person’s name, and range of dates covered by the time tracking sheets. The name and start date will be used to “populate” the weekly time sheets. Once a person’s name is entered on the summary sheet, the name should appear on each of the weekly spreadsheets. Once the start date is entered on the summary sheet, that start date will also appear on the first week’s spreadsheet. Using date arithmetic, a date seven days later will appear as the start date on the second week’s spreadsheet, etc. (Do not manually enter any dates on weekly time sheets.)

Make sure the user know where to enter the user’s name and start date, e.g., you could shade or draw a border around these two data input areas. Include brief instructions on your first spreadsheet.

The user will enter tasks as described in the Table of Tasks, i.e., class, job, meal, relax, shop, sleep, study, and travel into the weekly spreadsheets. [Note: You don’t have to enter true information. You can create fictitious schedules.]

The spreadsheets should do the work. Users should never have to reenter data on the cumulative spreadsheet. The data on the cumulative spreadsheet should be accumulated from the weekly spreadsheets. You may want to use the cumulative spreadsheet to propagate common data to weekly spreadsheets, e.g., the person’s name.

Assignment Outputs

Users can view the weekly time sheets recording the tasks. Each week must be presented on a different spreadsheet.

Users can view weekly and cumulative summary information including: (1) How much free, i.e., unscheduled time the user had during traditional school hours, i.e., between 8 am and 5 pm on weekdays? (2) How much time the user spent taking classes each week? (3) How much time the user spent each week, month, or time to date, spent doing task x? (i.e., eating meals, relaxing, shopping, studying, traveling; all tasks but sleeping). (4) How much time the user spent sleeping? (If sleeping is not recorded at the earliest or latest time of a day, assume sleep between midnight and 7:00 a.m.). (5) How much time the user spent working at another job each week? (Working at your education is your primary job.)

Users can also view some graphical representation of the cumulative data. The type of chart(s) and organization are at the designer’s option, but some sort of graphical representation of the data must be present.

At least some spreadsheets must print in landscape mode and some must print in portrait mode. You will select the print orientation of each sheet and build it into your design.

You should not use default, i.e., MS Excel supplied names unless those names are meaningful and appropriate for your problem. Don’t keep tab names like Sheet1, Sheet2, etc.

Enhancing the Project

You are not required to enhance your project. Some students may have prior knowledge of MS Excel and may wish to learn or experiment with more advanced features that we cannot cover in this course. Go ahead. For instance, you might want to
- automatically (conditionally) color the task cells differently.
- use a dropdown list of tasks for each schedule cell to avoid typos that may occur with manual entry of task names.
- lock cells on your spreadsheets so the user can only type into specific cells, e.g., the user could not type over a time or could not type into a cell that displays calculated results. [Important! If you do wish to protect cells or sheets, do not enter a password. Use an empty password so a grader can access your protected work.]
- verify that the start date is always a Sunday and that it is the correct date with respect to the calendar.

We don’t have time to teach all features of MS Excel, but will work with you if you wish to advance beyond the basics.