

PDA Toolbox For The Absolute Beginner

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Project 1: Make a useful calculator, with introduction page, calculator page and explanatory text page. In the process, you will get all the software needed for creating a very useful Palm program, learn to use many of the software's creation and editing features, and install and use POSE (Palm Operating System Emulator), the invaluable, essential virtual PDA.

Confession: I am as close to being an absolute beginner as one can be without actually being one. I escape the absolute beginner designation only because I have produced a highly functional application using PDAT (PDA Toolbox). There was a lot of struggling along the way, and much help came from the kind souls at the PDAT Nuts and Bolts Forum. I was motivated to write the current paper (1) So that I wouldn't forget my few hard-learned lessons and (2) To try to answer some of the questions that might plague other absolute beginners.

Comment: I know that this is a pretty long paper. It is long because creating a computer program, even with very good compaction tools, is still an involved process. In fact, this paper is no longer than a set of instructions for making a really good Thanksgiving dinner menu (with fancy recipes) from scratch. I have tried to follow a cookbook recipes format. The reader must always remember that a potato and a sweet potato are radically different items. The computer is even more unforgiving than your dinner guests, and ANY deviation from the recipe may cause the project to fail. Computers are so literal – not a poet among them. So, \$Tip 551 must be exactly that: \$Tips 551, \$Tip551 and "\$Tip 551" will fail.

Caution: Before you get all wrapped up in this project, please make sure that you have installed the Palm Desktop for your PDA on your computer. This allows for proper recognition of .prc files, which is a vital step in the process of creating PDA programs.

Convention regarding quotation marks: Without exception, text put in quotation marks in this paper should be re-typed without the quotation marks. So, if there is an instruction to type "Calculate" in a Text Label field, you should type Calculate.

Definitions:

PDAT is PDA Toolbox, the "first step" program employed in this project.

POSE is the Palm Operating System Emulator. This is a "virtual PDA". It is a computer program that puts a life-like copy of a real Palm PDA on the computer screen. This simulation looks and acts exactly like a real PDA, except of course that you can't spill

coffee on it. It is invaluable for testing and modifying your PDA program-writing projects.

ROM's are Read Only Memory software. This is essentially the operating system for your PDA. By using different ROM's in POSE, it is possible to see how a program will interact with various versions of the Palm operating system (Version 3, Version 3.5, Version 4, etc.). Realistically, though, you can do just fine using only the Palm 505 4.1. More about that later.

RAM's are Random Access Memory software. The programs that you create are RAM's. **RsrcEdit** is a program that allows for ResourceEditing. Resources are just the components of the computer programs that you create. Editing means creating and modifying these resources. Think of resource editor as a place where you mash potatoes. **PDAT/Advanced** is a program that takes the Resources and hooks them up in ways that allow them to function in the programs that you create. Think of PDAT/Advanced as a big spoon that allows you to move the mashed potatoes onto a plate.

Overview: PDAT is an almost irresistibly easy tool for developing applications for the Palm operating system. It is inexpensive, just \$25 for the registered version. (Registration is a must because the unregistered version lacks essential tools, such as the ability to do calculations.)

In contemporary usage, the notion of creating Palm applications with PDAT alone is invalid. Because of the availability of powerful, freeware/shareware tools that greatly augment PDAT, PDAT should be regarded as the cornerstone of a 4-program combination. Use of all 4 elements is necessary to complete most projects quickly and accurately. The 4 elements and their sources are:

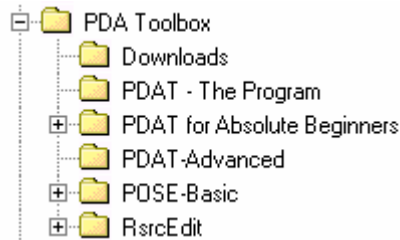
1. PDA Toolbox (PDAT) <http://www.PDAToolbox.com>
(Left-hand column, Version 5.2A ReRelease. Check out the Tutorial there, too.)
2. RsrcEdit <http://www.Quartus.net>
(Choose a product > Select Quartus RsrcEdit > Go > Download)
3. PDAT/Advanced <http://www.SandsUSA.com/PDAT>
(Download PDAT/Advanced)
4. Palm Operating System Emulator (POSE) <http://www.palmos.com/dev/tools/emulator/>
(Emulator Application 3.5 – about halfway down the page. Also download Emulator Skins 1.9, while you're there. ROM's after you get a developer number from Palm.)

Is it possible to get by with just PDAT? For very simple applications, the answer is yes. For anything a bit more complicated, probably not. More importantly, advanced users, who are very generous in providing help at the PDAT Support Site (<http://www.pdatnutsandbolts.com>), will tend to couch their advice in terms of the use of

the 4-element combination. So, it is best to get in step with the 4-element strategy from the outset. This approach avoids a lot of frustration.

Step 1. Get the Goods.

(1) Make a folder on your computer labeled PDAT. In that folder, make sub-folders named Downloads, PDAT-Program, PDAT-Advanced, RsrcEdit and POSE Basic.



(2) Go to the sites in the box on the previous page and download PDA Toolbox, RsrcEdit and PDAT/Advanced into the PDAT/Downloads file. Immediately pay the \$25 to register PDAT. (Don't worry—the author has NO financial connection to any of these companies!)

(3) POSE is a slightly more complicated matter. At the Palm OS site <http://www.palmsource.com/>, you will need to register as a developer. [Developers > Get Started > Join the Palm OS Developer Program > Join] This is free. In a day or three, Palm will send you an e-mail recognizing your successful registration, together with a password for your account. (Your login name is your e-mail address, your password is the one e-mailed to you by Palm.)

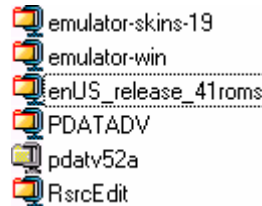
(4) After you have the password, go back to <http://www.palmos.com/alliance/resources.cgi/devseed/roms/>. There, get the PalmOS 4.1 ROM files by clicking on Export Controlled ROMS > I Agree > I Agree > Palm OS 4.1 English and EFIGs Platform (release). Click on the little icon (Windows or Mac) and download to your PDAT/Downloads file. You will also need to get Skins for the Emulator at <http://www.palmos.com/dev/tools/emulator/>. Get the Emulator 1.9 Skins. **Avoid the PalmOS 4.1.2 ROM's – they contain a bug that limits you to 3 old Palm devices, none with color.**

OK. Up to this point you have

- (1) Made sure that you have the Palm Desktop installed on your desktop computer
- (2) Gotten your Palm Developer's password from Palm so that you can get ROM's
- (3) Set up some folders on your computer to store the files in an orderly way and

(4) Downloaded the following .zip files from the sites listed above.

The Downloads file should look like this:



Got the goods? If so, do this:

1. Go to your PDAT/Downloads folder and unpack the .zip files. **Unpack pdatv52a last, since that unpacking will trigger a program installation.** Unpack each .zip file to the folder it corresponds to: (a) emulator-skins-19, emulator-win and en USrelease 41roms should be unpacked into the POSE-Basic folder, (b) PDATADV should be unpacked into the PDAT/Advanced folder, (c) RsrcEdit should be unpacked into the RsrcEdit folder.

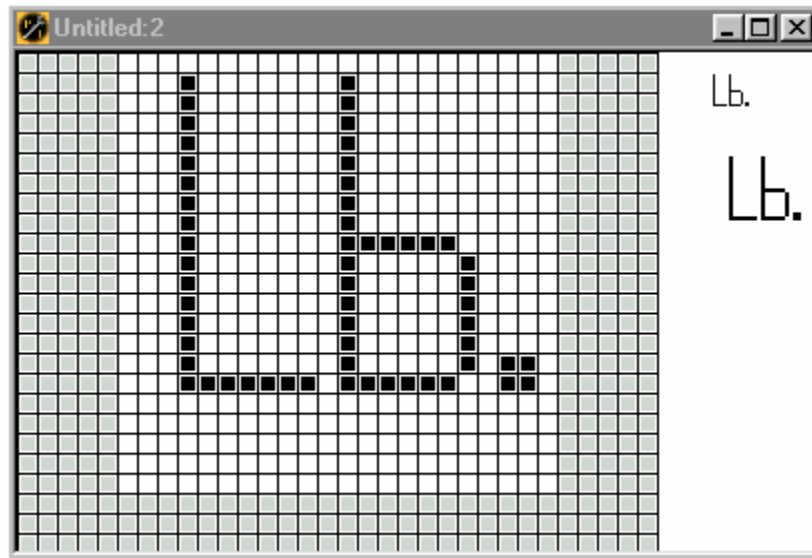
2. Go ahead and double click on pdatv52a. This will trigger installation of a program. When the PDAT installation routine asks for a target folder to place PDAT, browse to PDAT/PDAT Program, and install it there.

Step 2: The PDAT Phase of the Project. The application that is going to be created in this paper is a calculator for determining whether a person is obese, and if so, just how obese. The measurement used to determine obesity is called Body Mass Index (BMI). BMI is defined as the weight in kg divided by the height in meters squared. There are lots of BMI calculators available on the Web, and free ones can be downloaded for use on the Palm. Nearly all of the steps outlined below are also clearly explained and examples are shown at <http://www.pdatoolbox.com/tutorial.htm>.

1. Open PDAT.
2. Click File>New
3. In application name, type Weight Watcher
4. In creator I.D., enter dedo. (You can enter any 4-character ID, but **you MUST enter a unique I.D. for every new application.** The creator I.D. is the information that the Palm PDA uses to register apps. You will have a hard time

deleting an app from your handheld if it shares a creator I.D. with another app.-- You will have to delete both apps.) If you decide to distribute or sell your app to others, you **MUST** register the creator I.D. with Palm. (This is the central clearing house for application identifiers.)

5. Create the **icon**. (Everybody likes to make icons.)
 - (a) Click on the Edit button in the Application Icon box.
 - (b) Click on the little blue rectangle in the toolbar, then hold down the right mouse button and drag from the upper left-hand corner to the lower right-hand corner of the sample icon. The whole area should turn white.
 - (c) Next click on the little blue pencil, just left of the blue rectangle. Hold down the left mouse button, and write Lb. in the icon box. Close the Icon Editor.
 - (d) Click Save. Save as Weight.pfa.



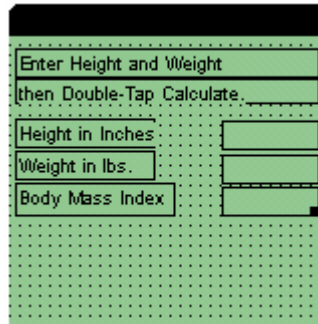
6. Click the New Form icon, which is **a little white box with a star on it**. In the top of the form, type in Weight Watcher. Click OK. This will be the first page of the application, the page that a user will encounter upon tapping on the icon. The tab at the top of the page will say Weight Watcher. Click Save.
7. Click the Text Label field on the Toolbar, **AB**. A little green rectangle marked Unlabeled will appear. Drag it onto the form. Put the cursor on the little black control square in its lower right hand corner, press the left mouse button and drag down and to the right, making the box a little bigger. Double click the box. The Edit Control Properties dialog appears. In the Field Text box, type in Welcome to Weight Watcher. In the Label Font drop down box, click on Large Bold. Click OK. If the whole phrase Welcome to Weight Watcher is not seen, because part of it is cut off, put the cursor over the small black square at the lower right hand

corner of the box, and drag to the right until the box is big enough to display all the text. Next, drag the text box so that it is nicely centered just above the center of the page. Click Save.

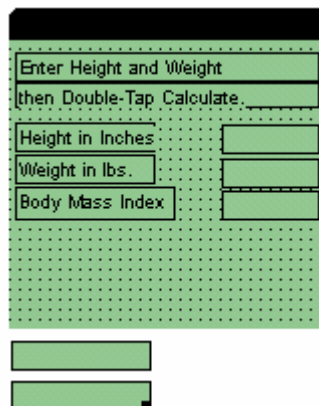


8. Click on the Button field on the Toolbar, **OK**. A little green octagonal box appears. Drag that box to near the bottom of the page, and center it under the Welcome to the Weight Watcher box. Click Save. We will work on this box in a minute.
9. Once again, click on the New Form icon, which is a little white box with a star on it. A new page appears. In the Form Properties box, type the Form Name as Body Mass Indicator Calculator. Click OK. Click Save.
10. Just as before, click on the Text Label field on the Toolbar, **AB**. Drag the label field to the top of the page. Put the cursor over the little black square at the bottom right of the Label box, and drag as far to the right as you can without going off the page. Double click Unlabeled, and type in the first part of the How-to sentence: "Enter Height and Weight," . Since the whole sentence will be too long for one text box, so again click on **AB**, drag the text box so that it lines up with the first one. Double click on Unlabeled and in the Edit Control Properties box type "then Double Tap Calculate." (Without the quotation marks.) Click Save.
11. Once again, click on the Label field on the Toolbar, **AB**. Drag that label box to the left center of the page. Now, right click on the Unlabeled box, left click on Duplicate, and drag the second text box just below the first one. Again, right click on the Unlabeled box, left click on Duplicate, and drag the text box to line up with the other two Unlabeled boxes. Double click on each unlabeled box. In the top text box, enter the text, Height in Inches. In the second text box enter, Weight in Pounds. In the bottom text box enter, Body Mass Index. This last box will need to be stretched to the right slightly to display the text. Click Save.
12. Here is how the user will enter data into the calculator. Click on the Data Field button, **A**. A green rectangle appears. Drag it so that it is just beside the text box marked Height in inches. Right click on this box, left click on Duplicate, and drag the new rectangle it so that it is beside the Weight in Pounds text box. Once again,

right click on the blank rectangle, left click Duplicate, and drag this third box so that it sits just to the right of the Body Mass Index text box. Click Save.

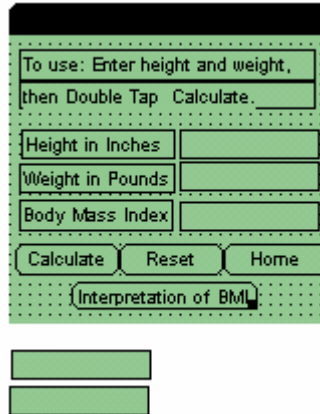


13. Double click on the top empty green rectangle. In the Edit Field box, for I.D. enter “inch”. For field type, click on the drop down arrow and click on Numeric. Click OK. Double click on the middle empty green rectangle. In the Edit Field box, for I.D. enter “LBLB”. For field type, click on the drop down arrow and click on Numeric. Click Save.
14. But wait! Way back in the Step Two introductory paragraph, it was indicated that the BMI formula was for kg and meters, but the information being requested of the user is in pounds and inches. How is this going to work? Well, there is going to need to be a conversion step from pounds to kgs and from in to meters. To keep from confusing the user, we will hide these steps by putting their boxes off the page, in the white margin surrounding the page. Click on the Data Field button A. Drag the new empty green rectangle so that it is below the green page, on the white area. Right click on the new empty green rectangle, left click on duplicate, then drag the new rectangle just below the first one. Click Save.



15. Double click on the upper rectangle in the area below the page. In the Edit Field Properties box, enter the I.D. "METR", and in the field type, click on the drop down arrow and click on Calculated. At the bottom right of the Edit Field Properties box is the word Calculations. The formula for converting inches to meters is meters = inches x 0.0254. So, in the Field Equation box, type +(inch*0.0254). Click OK. Click Save. (Caution: Equations in PDAT must not exceed 100 characters! More lengthy equations can be handled by breaking them down into component parts, and then re-assembling those parts in a final step.)
16. Double click on the lower rectangle in the area below the page. In the Edit Field Properties box, enter the I.D. "kgkg", and in the field type, click on the drop down arrow and click on Calculated. At the bottom right of the Edit Field Properties box is the word Calculations. The formula for converting pounds to kg is kg = pounds/2.2. So, in the Field Equation box, type +(LBLE/2.2). Click OK. Click Save.
17. At long last, the calculation itself! On the green page, double click on the lowest empty rectangle. In the Edit Field Properties box, enter the I.D. "BBMI", and in the field type, click on the drop down arrow and click on Calculated. At the bottom right of the Edit Field Properties box is the word Calculations. The formula for Calculating BMI is kg/m^2 . So, in the Field Equation box, type +(kgkg/(METR^2)). Click OK. Click Save.
18. Now, the Calculate button. Click on the Button field icon, **OK**. Drag the green octagon to the bottom of the green page. Resize it by dragging on the small black square at the right hand corner of the box so that it is a little less than one third of the page wide. (Do **not** add Buttons by using Duplicate, since this can result in duplicate calls for the same Action. At least, the author has suffered that problem.) Add 3 more Buttons by clicking on the Button field icon **OK**.

You should now have the four at the bottom of the green page. Double click the leftmost button, and in the field properties box for Button Text type in **Calculate**, and leave the Action box setting at No Action. Click OK. Double click on the second bottom box, for the Button Text type **Reset**, and in the Action box click on the down arrow, then click on the line Goto Form "Body Mass Index Calculator". Click OK. Double click on the third button at the bottom of the page, for Button Text enter **Home**, and for Action select Goto Form "Weight Watcher". Click OK. Click Save. Double click on the fourth button. For Button Text type in "**Interpretation of BMI**". Leave Action as No Action. Click OK. Drag the small black square at the right hand corner of the button to the right to make the button big enough to display all the text. At this point, the Body Mass Indicator Calculator form should look like this:



19. In the Application Forms grid, double click on Weight Watcher. Double click Button. In the Edit Button Properties Box, for Button Text enter “Go To The BMI Calculator.” Stretch the button by placing the cursor over the small black square at the bottom right hand corner and dragging to the right until all of the button text is visible. For Action scroll down to and select Goto Form “Body Mass Index Calculator”. Click OK. Click Save.
20. This is a good point to test our work. Click File, Generate Palm Application, Weight Watcher will be the .prc name. Click Save. At this point, you may wish to put the application on your PDA by opening the folder where the Weight Watcher.prc folder is stored, double clicking on the file, and performing a Hot Synch to your PDA. Test your new app on your PDA. Assuming that the application works properly to this point, we are ready to move on to the very interesting world of POSE.

Step 3: The POSE phase of the project. To set up POSE, go to the PDAT/POSE-Basic folder where you unpacked the emulator-skins-19, emulator-win and en_USrelease_41roms. **Double-click on platform 41 m505 enUS.rom**. There will be a New Session dialog box: Click OK. The Palm 505 will appear on your desktop, ready for action. Set the time on the 505, if you like, then click on its Applications button.

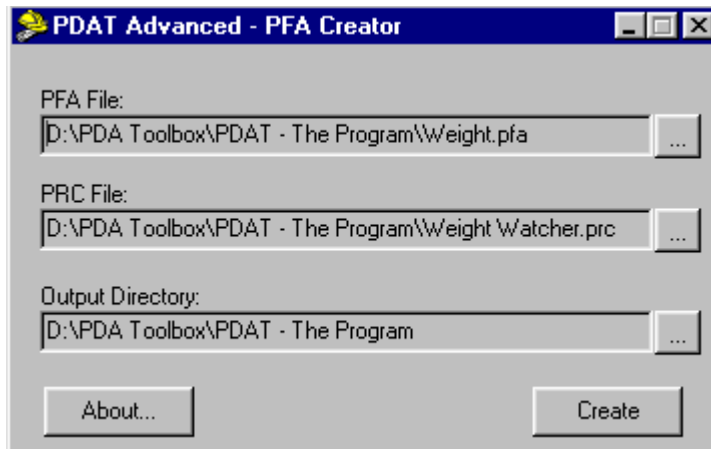


To anyone who has used a Palm 505, this should look very familiar.

You may wish to play with the apps on the Palm 505 for a while to convince yourself that they are EXACTLY like those on an actual Palm 505 PDA.

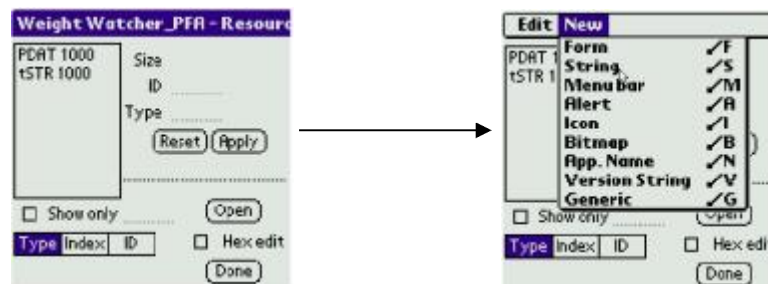
1. Next, we need to load our Weight Watcher.prc file onto the virtual Palm 505 that POSE has provided. This is very easy: Right click anywhere on the virtual Palm 505, click “Install Application/Database, click Other, select Weight Watcher, click Open. (Alternatively, one may go to the PDAT/PDAT Program file in Windows Explorer, find Weight Watcher.prc, and drag and drop that file from Windows Explorer onto the virtual Palm 505.) A little transfer bar will come up for a few seconds as the transfer is accomplished.
2. Before you go any further, disable the debugging routines of POSE. To do this, right click anywhere on the virtual Palm 505, click Settings, click Debugging and uncheck all the boxes. This is necessary because PDAT does not do well with these debugging routines, and very experienced PDAT users have indicated that the likelihood of bad consequences due to this approach is extremely small.
3. Now, on the virtual Palm 505, scroll down to the Weight Watcher icon, double click it, go to the calculator, enter height and weight, and DOUBLE CLICK CALCULATE. Why some calculations require 2 clicks is a mystery, but they do. The easy work-around is to re-name the Calculate bar as “Calculate-Tap Twice”.
4. On the virtual Palm 505, click Applications. Next, right click anywhere on the virtual Palm 505, click “Install Application/Database, click Other, go to the PDAT/PDAT-Advanced folder, click on PDATAdv, click Open, and PDAT/Advanced will be installed on the virtual Palm 505.
5. Similarly, right click anywhere on the virtual Palm 505, click “Install Application/Database”, click Other, go to the PDAT/RsrcEdit folder, click on RsrcEdit, click Open, and RsrcEdit will be installed on the virtual Palm 505. Now, all 4 elements are in place for addition of “Interpretation of BMI” text, a step that will require use of PDAT/Advanced and RsrcEdit.
6. Before going to work with PDAT/Advanced and RsrcEdit, it is necessary to create a special file best thought of as a combination file. This file AND the Weight Watcher.prc file must BOTH be installed on the virtual Palm 505 to allow proper use of PDAT/Advanced and RsrcEdit. Go to the PDAT/PDAT-Advanced folder. Double click the yellow pdatadv icon. In the dialog box that follows, browse in the PDAT/PDAT Program file to select the Weight.pfa and Weight Watcher.prc files. Click OK and the “combo” file Weight Watcher_PFA will be created.

This is how the dialog box for creation of the “combo” file should look:

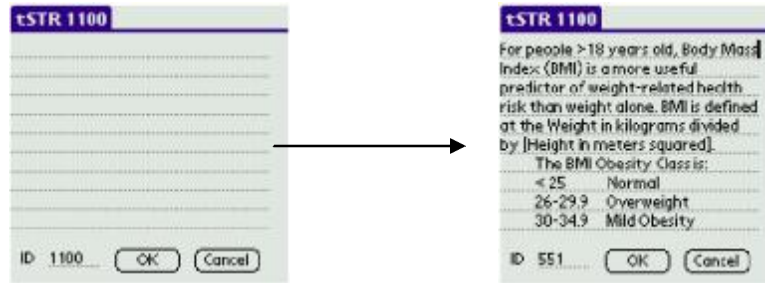


7. Again, go to the virtual Palm 505, right click anywhere, click “Install Application/Database”, click Other, go to the PDAT/PDAT Program folder, click on Weight Watcher_PFA, click Open, and the “combo” file will be installed on the virtual Palm 505. At this point, both the Weight Watcher.prc file and the Weight Watcher_PFA.prc file will be on the virtual Palm 505.

8. Now, click on RsrcEdit. In RsrcEdit in the drop down list, click on Weight Watcher (**NOT** Weight Watcher_, the combo file). Weight Watcher will be in the RAM list. Click Open. Click on the Weight Watcher Resource List title bar at the top of the screen, and then click New, String.



9. In the box that opens, change the ID number to 551. Enter the following text: “For people >18 years old, BMI is a better predictor of weight-related health problems than is weight alone. BMI is defined as the Weight in Kilograms divided by [Height in meters squared]. The BMI Obesity Class is <25 Normal, 25-29.9 Overweight, 30-34.9 Mild Obesity, 35-39.9 Moderate Obesity, >40 Severe Obesity. These criteria do not apply to heavily muscled individuals.” Click OK



Click OK. Click Done. Close RsrcEdit by clicking on the Applications button on the virtual Palm 505.

10. Click on the red toolbox icon that marks PDAT/Advanced. (If PDAT/Advanced does not open to the page that has www.SandersUSA.com at the bottom, click Done and it will return to that page.) Select Weight Watcher, click Open. Click OK to allow a compile. Select tFRM1100 and click Open. Click on the “Interpretation of BMI” button. Replace the text “\$NoAction” with “\$Tip 551” without the quotation marks. Click OK. Click the Applications button on the virtual Palm 505. Click compile in PDAT/Advanced, click OK in the box that acknowledges a successful compile, and then exit PDAT/Advanced by clicking on the Applications button on the virtual Palm 505.

11. It is altogether likely that you would prefer that the “Interpretation of BMI” button lead to a page whose title bar does not say “Tips”. Here’s how to modify the title bar for your text string, to change “Tips” to “Interpretation”:

- (1) Open RsrcEdit
- (2) Make sure a check mark is in the box marked “ROM db’s”
- (3) Scroll in the left-hand box until you come to the System_enUS file. Click on that file and then click “Open”
- (4) In the System_enUS Resource List, scroll down until you find tFRM10400. Click on that file. Click on the title bar, System_enUS-Resource List, and from the Edit menu click Copy
- (5) Click Done. This takes you back to the RsrcEdit main page. Make sure that there is a check mark in the box marked “RAM db’s”
- (6) Scroll to Weight Watcher. Select Weight Watcher, click Open. Click on the title bar, “Weight Watcher-Resources”
- (7) In the Edit menu, click Paste. tFRM10400 is now part of the Weight Watcher resource list.
- (8) Scroll down in the Resource List until you find tFRM10400. Click on that file. Click Open.
- (9) On the tFRM10400 page, Click Title, Click Open
- (10) Replace “Tips” with “Interpretation”. [If you are going to have a lot of these explanatory text strings on a variety of topics, it might be best to replace “Tips” by removing that word and not replacing it. That would leave the title blank, which might be better than having an inappropriate title.] Click OK.
- (11) To see your handiwork, click Preview. To back out, click the Applications button on the virtual Palm 505.

(12) Click OK . Click Done. Click Applications. All fixed!

Perhaps you would like to change other formatting aspects of your “Interpretations” text, such as to change from bold text to regular text. To do this:

- (1) Open RsrcEdit, make sure that there is a check mark in the box marked “RAM db’s” scroll to Weight Watcher, click on Weight Watcher, click Open.
- (2) In the Weight Watcher Resource List, scroll to tFRM10400, click on that file, click Open.
- (3) In the tFRM10400 page, click on Field 10402, click Open.
- (4) Click on the Font drop-down box, select standard. You may wish to change alignment, too.
- (5) Click OK, click OK, click Done, click Applications.

It might be nice to add a disclaimer to your application, so that those who use it understand that you provide no warranty for its use. There are lots of ways of doing this. The simplest method is to make the first page of the application the disclaimer, with lots of advisory text followed by 2 buttons, “Agree” and “Do Not Agree”. The action associated with the “Do Not Agree” button is NoAction, so the user just sits there on the Disclaimer Page. The action associated with “Agree” is Goto Form “Weight Watcher”. If you are adding this disclaimer page after you had already created other pages, you can arrange for it to be the opening page easily. Just open your app in PDAT/Advanced, click on the Form where the Disclaimer is placed (for example, tFRM1400), and check the box “Startup Form”. The Disclaimer page will now appear when the user opens the app. It would be more stylish (but somewhat less effective) to put the Disclaimer as an item on the Menu Bar of the Home page.

Adding a Menu Bar Item:

- (1) In the virtual Palm 505, open RsrcEdit
- (2) In RsrcEdit, make sure that there is a check mark in the box marked “RAM db’s”, scroll to Weight Watcher, click on Weight Watcher, click Open.
- (3) On the Weight Watcher –Resource List page, click the title bar. Click New, click String. tSTR 1200 Opens. Change the ID to 552. For text enter, “Determination of a sensible policy for weight control requires assessment of multiple factors in addition to height and weight. Individuals should discuss this process thoroughly with a health care professional before beginning a weight control program. The author disclaims responsibility for action taken on the basis of information provided by this application.” Click OK. Click Done.
- (4) Again click on Weight Watcher. Click Open. In the Weight Watcher Resource List, scroll to MBAR999. Click on that file, click Open.
- (5) Click on the title tab MBAR 999. In the list on the title bar, click New. In the box listing the Menus, New Menu appears. In the top line, replace the words New Menu with Disclaimer. Click Apply. Now click Open, and MBAR999; Disclaimer menu appears.
- (6) Click on the title tab MBAR 999;Disclaimer menu. In the list on the title bar, click New. In the box, “New Item” appears. In the Title line, replace the words New Item

- with Warning. After ID, enter 6500. **Click Calc. Size.** Click Apply, click OK, click OK, click Done. Click Applications to exit RsrcEdit.
- (7) Open PDAT/Advanced. If the Opening page with www.SandsUSA.com/PDAT does not appear, click Done to get to that page. On that page, click on Weight Watcher. Click Open.
 - (8) In the Weight Watcher page, click on tFRM 1000. Click Open. This opens the page “Welcome to Weight Watcher”. Click on the Tab at the top of the page, “Weight Watcher”. Click on “Disclaimer”, click on “Warning”.
 - (9) The page tFRM1000-Actn6500 opens. In the first line type “\$Tip 552” without the quotation marks. Click OK. Click Applications. Click Compile. Click Done. Click Applications to exit PDAT/Advanced.

Run your application from the PDAT/Advanced opening page and test all its features. Click on applications to exit PDAT/Advanced.

Now here’s a tricky part: You’ve greatly changed your app, but you haven’t saved it yet. To save the newly-modified app, right click anywhere on the virtual Palm 505, Click “Export Database”, select Weight Watcher, click OK, go to the PDAT/PDAT Program file, click Save, when asked if it is OK to replace the old file of the same name, click Yes.

To exit the virtual Palm 505, right-click the POSE icon at the bottom of the screen. Save this POSE session as “Weight Watchers – Text Added” (without the quotation marks), and all of the software machinery that you put in place will be available for your next session. Save to the PDAT/PDAT Program file. Click Exit.

Congratulations on producing a highly functional application. It will soon get company from other (and no doubt better) applications that you have created.

Acknowledgment: This paper would have not been possible without the untiring help of the talented programmers who participate in the PDAT Nuts and Bolts Forum. Special thanks go to Rick Sands (Rick@SandsUSA.com).