Advanced (Best) Calculator Manual Tests: 2013

# Save/Restore

Customer promise: Advanced calculator will constantly save the current calculator state. If the user stop at any time and ends the program (e.g., swipes it out and PLM kills it), when the program is re-run, it will be in the same state. Note only that, but the state roams: run the program on machine "1" , and then on machine "2", and machine 2 will exactly duplicate the program.

## Testing Procedure

### View state: degrees and radians, type, precision

#### Initialize:

1. run the program
2. advanced & click radians
3. format & click percent and 1
4. constants & click PI
5. check result: Radians/percent/1; display is 314.2%
6. exit the program

#### Set values

1. run the program
2. check result: Radians/percent/1; display is 314.2%
3. advanced & click degrees
4. format & click standard and 4
5. check result: degrees/standard/4; display is 3.1416
6. exit the program

#### Final Validation

1. run the program
2. check result: degrees/standard/4; display is 3.1416

### View state: what's visible

#### Initialize

1. run the program
2. Memory
3. check results: memory page is shown
4. exit the program

#### Set Values

1. run the program
2. check results: memory page is shown
3. set memory 9 name to "apple"
4. set memory 'apple' value to 77
5. financial & mortgage
6. switch to other app & wait 5 seconds
7. switch back
8. exit the program

#### Final Validation

1. run the program
2. check result: mortgage
3. memory
4. check result: memory 9 is 'apple'/77
5. press + 3 times; result is 80
6. press - 2 times; result is 78
7. exit the program

### Health: BMI

#### Initialize

1. Run the program
2. Health & BMI

#### Testing + Verify Conversions

1. Set Weight (kilograms )to 1
2. verify weight: pounds is 2.2
3. Set weight (pounds) to 10
4. Verify weight (kilograms) is 4.54
5. Set height (meters) to 1
6. Verify height (inches) is 39.37
7. Verify height is 3 and 3.37
8. Set height to 6' 1"
9. Verify height (meter) is 1.85
10. Set BMI to 25
11. verify weight (pounds) is 189.49

### Health: BMI Children

#### Initialize

1. Run the program
2. [Run all of the Health BMI tests]
3. Health & BMI Children

#### Testing + Verify Conversions

1. BMI🡪19.33801062, age🡪2, gender🡪male
2. Result: 95🡪97, low, obese
3. BMI🡪 14.73731947, age🡪2, gender🡪male
4. result: 5🡪10, low, normal
5. BMI🡪 14.73731946, age🡪2, gender🡪male
6. result:3🡪5, high, underweight
7. BMI🡪 14.52095333
8. result:3🡪5, low, under
9. BMI🡪 14.52095332
10. result: 0🡪3, under
11. gender🡪female
12. result: 5🡪10, middle, normal

# Program Logs

Customer Promise: Advanced Calculator will create only useful startup logs. The contents are clear and professional. Logs will not contain "personal" data and will not include the user's math.

Log will not get constantly larger

## Information

Logs are saved at C:\Users\Almighty\AppData\Local\Packages\48425ShipwreckSoftware.BestCalculator\_jh2negtepkzpr

and then go to the localState directory. Logs are in appCalculator.log

## Testing Procedure

### Logs don't get constantly larger

#### Test:

1. Go to the log directory and check the log size
2. Run the program
3. Check the log size again; it should be no larger

### Logs contain no errors

#### Test

1. Run the program; do 1 minutes of calculator work. Use at least the calc, the advanced calc, constants, and the programmer's calc
2. findstr /I error appCalculator.log
3. any "error" In the log is an automatic fail

# Networking

Customer promise: network functions report status discretely. While networking is happening, UI remains fluid and responsive. Errors are reported as simply an error; no stack trace is given but a stack trace/more information is present in the log.

## Testing Procedure

### Feedback works

#### Test

1. Go to feedback
2. In 'subject' enter 'test feedback'; in 'like' and 'dislike' enter test. Subject of 'test feedback' will auto-delay networking by 20 seconds
3. Press send

#### Verify results

1. Within seconds, should say "thanks"   
   (or similar)
2. On [web site](http://changemyglobe.com/Admin/AdminForumShow.aspx), new comment should show up

### No Networking Works

#### Test

1. Go to Settings, network (📶) and disable your network. Verify by checking that, e.g., ie with bing.com is not available.  
   If you are using Ethernet (e..g, a simulator or VM), then you have to go to the classic Network Settings, to the Adapters, select the Ethernet adapter, and click 'disable'
2. Do all steps from "Feedback works"
3. Press the 'calculator' button and try to calculate '1+2='
4. Go back to 'Feedback'

#### Verify results

1. Calculation should 'just work'
2. Within 30 seconds (after the wait time is up), feedback should fail will 'network site not available' or similar
3. Log file will include more information

# Source Code

You must check the code for TODO items before shipping anything. I have let in a couple of TODO items, but over time the number should go down, not up.

The Best Calculator, IOT Edition can come with source code. You need to rebuild the source code with the latest changes and make sure it builds

1. Exit out of Visual Studio
2. Run the BuildSourceCodePackages.bat
3. Copy the source.zip to a temp directory and expand it.
4. Double-click on Advanced Calculator \ AdvancedCalculatorUniversal.sln
5. Build and run

# Shipping the manuals

The manual is

1. Edited as a Word .DOCX file as “Best Calculator and BC BASIC.docs”
2. Update the Table of Contents and Index
3. Save as PDF into AdvancedCalculatorUniversal\Assets as BestCalculatorBasicReference.pdf.
4. Backwards compat: also Copy into AdvancedCalculator\Assets for Win8 people
5. Upload PDF into CreateSpace. You can ignore most of the warnings (they are things like, “your images are less than 200dpi” which I know about, and “images are bleeding into the gutter” which is OK”. But check them anyway.
6. Upload the new manual to the best calculator web site.