

CRABCAKE

Readme



What is Crabcake?

Crabcake is an ASM add-on library that allows you to develop Ti-83+/Ti-84+ ASM programs larger than 8 KB, meaning more than 8 KBs of pure code. These programs will do nothing to modify your operating system or any other data you might have stored.

Will my program work on a regular 83+?

Yes, if you want it to.

Will my program be compatible with all Ti-83+ and Ti-84+ calculators?

Yes, again if you want.

What files do I need?

Aside from the development tools that you choose for ASM development, you will need the following 3 files, included with the download: crabcake.inc, unlock.as and swap.asm

How do I go about incorporating Crabcake into my asm program?

1. In your list of include files, #include "crabcake.inc"
2. Your ASM program will have to run inside a shell. While DoorsCS and MirageOS are excellent shells, I recommend Ion so that your program can run on **all** shells. If you have never written an ASM program for a shell before, type in the following at the start of your program (this is called a "header"):

```
xor a  
jr nc, $ + 2
```

3. After your header, type in the following line: CRABCAKE_Start
4. At the very end of your ASM program, type in the following line:
CRABCAKE_End
5. UNDER NO CIRCUMSTANCES should you completely end your program using ret. Instead, use jp Wrap_It_Up.
6. If you want your program to run only on 83+ Silver Edition or 84+ calculators, you can save much space in your program by typing the following line before CRABCAKE_Start:

```
#define Not83Plus
```

Such a program will safely quit if a user tries to run it on a normal Ti-83+.

Ummm... You lost me.

No problem! Here's an example program:

```
#include "ti83plus.inc"
```

```
#include "crabcake.inc"
```

```
.org $9D93
```

```
.db $BB, $6D
```

```
    xor a    ;The program must run in a shell, so add a header
```

```
    jr nc, $ + 2
```

```
CRABCAKE_Start
```

```
B_CALL _ClrLCDFull
```

```
LD    HL, 0
```

```
LD    (PenCol), HL
```

```
LD    HL, Text
```

```
B_CALL _PutS    ; Display the text
```

```
B_CALL _GetKey
```

```
jp    Wrap_It_Up
```

Text:

```
.db "Hello world!", 0
```

```
CRABCAKE_End
```

Sweet! Is there anything I need to watch out for?

Yes indeed:

1. Large programs take time to start and exit. Be patient. Unless your calculator screen is blank for at least 20 seconds, it is very likely that your calculator is not “frozen.” You want to be absolutely sure that your program has a bug before reacting; it is quite possible that the program is just taking a while to get started.
2. Never incorporate Ti-84+ USB functions or Ti-84+ MathPrint into your program, even if you want the program to run only on a TI-84+. USB functions and MathPrint in your program will corrupt the user’s RAM.
3. Crabcake is guaranteed to work on regular Ti-83+ calculators if they have OS 1.16 or higher. Crabcake has not yet been tested on lower-end operating systems. When you release a program you should recommend OS 1.16 or higher
4. You may freely use Crabcake for any shell-based ASM game or program, although I always welcome credits and/or special thanks. If you, however, write a shell, a compiler, or any similar utility that includes Crabcake as a built-in library, you must credit me by telling users that your program “includes Rickie Malgren’s Crabcake library.”

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