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Thread: [How to convert a C++ algorithm to mips](#)

myt21 - October 19, 2017, 1:35 pm

So I have created the c++ algorithm but I have no idea how to convert it into mips

Code void

```
decrypt(unsigned char *ciphertext, unsigned char *plaintext, unsigned char *key,
unsigned char rounds) {
    unsigned char A[16];
    unsigned char B[16];
    unsigned char C[16];
    unsigned char D[16];
    key_addition(ciphertext, &key[16 * rounds], C);
    inv_shift_rows(C, (unsigned int *) B);
    inv_byte_substitution(B, A);
    for (unsigned int k = rounds - 1; k > 0; k--) {
        key_addition(A, &key[16 * k], D);
        inv_mix_column(D, C);
        inv_shift_rows(C, (unsigned int *) B);
        inv_byte_substitution(B, A);
    }
    key_addition(A, key, plaintext);
    return;
}
```

any one know how to do this

Glass Bones - October 20, 2017, 2:15 pm

Try looking into the Codescape MIPS SDK

drrrrrr - November 5, 2017, 2:56 pm

Most of this function are command in MIPS, you must download the manual and search for what you need.

0xZyd - February 3, 2018, 3:46 am

you should cross-compile your code

just download mips compiler for your system

Desomond - February 4, 2018, 2:42 am

You can use this website.

reliant.colab.duke.edu/c2mips/

And to become familiar with MIPS assembly you can use SPIM

It will run your mips program so you can build and test it.

[/spimsimulator.sourceforge.net/](http://spimsimulator.sourceforge.net/)

And if you google MIPS instruction reference you can learn what each instruction does. Manually playing compiler for the whole program is not easy but it helps to understand what your assembly is

actually doing.