

Embedded Systems

10/30/14

function - Convert Fahrenheit to Celsius ①

```
int f_to_c(int); // if -32768, if error
```

```
int f_to_c(int val) {
```

```
    val = (val - 32) * (5/9);
```

```
    return (val);
```

```
}
```

```
int f_to_c(int f) {
```

```
return -32768; int val;
```

```
if (f < -459) return (-32768)
```

```
int val = (long)(f - 32) * 5 / 9;
```

```
val = int(((float)f - 32.0) * 5.0 / 9.0);
```

```
return (val);
```

```
}
```

Embedded System 10/30/17
//function f_to_c - convert Fahrenheit to Celsius ②
int f_to_c (int); // if less than -459,
return error value -32768

```
#define LOWEST_F LOWEST_F (-459)
#define FUNCT_ERROR (-32768)
#define F_FREEZE (32.0)
#define F_TO_C_CONST (5.0/9.0)
```

```
int f_to_c (int f) {
    int val;
    if (f < LOWEST_F) return (FUNCT_ERROR);
    val = (int) (((float) f - F_FREEZE) * F_TO_C_CONST);
    return (val);
}
```

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