How to disassemble a program using xobjdump

version	1.1.1
scope	Example. This code is provided as example code for a user to base their code on.
description	How to disassemble a program using xobjdump
boards	Unless otherwise specified, this example runs on the SliceKIT Core Board, but can easily be run on any XMOS device by using a different XN file.

The xTIMEcomposer tools contain the *xobjdump* utility, which you can use to disassemble a given executable. For example, compile the following code:

```
#include <print.h>

int main() {
  printstr("Hello World!\n");
  return 0;
}
```

From the command line, the resulting executable can be disassembled as follows:

```
xobjdump -d a.xe
```

This will produce the following output:

```
....
<main>:
             0x000100ac: 44 77:        entsp (u6)      0x4
             0x000100ae: 4e 68:        ldc (ru6)       r1, 0xe
             0x000100b0: 00 f0 05 60: ldaw (lru6)      r0, dp[0x5]
             0x000100b4: 00 f0 4d d0: bl (lu10)        0x4d <printstr>
             0x000100b8: 40 68:        ldc (ru6)       r1, 0x0
             0x000100ba: 42 54:        stw (ru6)       r1, sp[0x2]
             0x000100bc: 01 54:        stw (ru6)       r0, sp[0x1]
             0x000100be: 02 5c:        ldw (ru6)       r0, sp[0x2]
             0x000100c0: c4 77:        retsp (u6)      0x4
....
```

You can use xobjdump to intermix the source lines with the disassembly output. This is enabled via the -S command line option:

```
xobjdump -S a.xe
```

This will produce the following output:

```
....
int main() {
             0x000100ac: 44 77:        entsp (u6)      0x4
             0x000100ae: 4e 68:        ldc (ru6)       r1, 0xe
  printstr("Hello World!\n");
             0x000100b0: 00 f0 05 60: ldaw (lru6)      r0, dp[0x5]
             0x000100b4: 00 f0 4d d0: bl (lu10)        0x4d <printstr>
             0x000100b8: 40 68:        ldc (ru6)       r1, 0x0
  return 0;
             0x000100ba: 42 54:        stw (ru6)       r1, sp[0x2]
             0x000100bc: 01 54:        stw (ru6)       r0, sp[0x1]
             0x000100be: 02 5c:        ldw (ru6)       r0, sp[0x2]
             0x000100c0: c4 77:        retsp (u6)      0x4
....
```