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//*****
// Test of SystemC Fixpoint Data Type
//
// Licensing:
//   This code is distributed under GNU LGPL license.
//
// Modified:
//   2012.07.03
//
// Author:
//   Based on SCLive 3.0 and www.asic-world.com example codes
//
//   Modifications by Young W. Lim
//
//
//*****

```

```
#define SC_INCLUDE_FX
```

```

#include <systemc.h>
#include <iostream>
#include <iomanip>

```

```

int sc_main(int argc, char * argv[]) {
    int i, j, k;

```

```

    sc_int<4> si, sj, sk;
    sc_uint<4> sui, suj, suk;

```

```

    sc_bv<8> bvi, bvj, bvk;

```

```

    for (i=0; i< 16; i++) {
        si = i;
        sui = i;
        cout << "i=" << std::setw(4) << i << " ";
        cout << "si=" << std::setw(4) << si << " ";
        cout << "sui=" << std::setw(4) << sui << endl;
    }

```

```

    for (i=0; i<16; i++) {
        for (j=0; j<16; j++) {
            si = i;
            sj = j;
            sk = si * sj;
            sui = i;
            suj = j;
            suk = sui * suj;
            bvk = si * sj;
            cout << "(" << std::setw(3) << i << std::setw(4) << j << ") ";
            cout << "[" << std::setw(3) << si << std::setw(4) << sj << "]" ";
            cout << "sk=" << std::setw(4) << sk << " ";
            cout << "si*sj=" << std::setw(4) << si*sj << " ";
            cout << "bvk=" << std::setw(4) << bvk << " ";
            cout << "[" << std::setw(3) << sui << std::setw(4) << suj << "]" ";
            cout << "sk=" << std::setw(4) << suk << " ";
            cout << "si*sj=" << std::setw(4) << sui*suj << " ";
            cout << "bvk=" << std::setw(4) << bvk << " ";
            cout << endl;
        }
    }
}

```

```
return (0);
```

```
}
```