www.highlevel-synthesis.com

```
ap_uint<13> r1, r2, r3;
ap_uint<7> v1 = 0x41;

r1 = v1 << 6;
r2 = ap_uint<13>(v1) << 6;
ap_int<7> v2 = -63;
r3 = v2 >> 4;

std::cout << " v1 = " << v1.to_string() << std::end1;
std::cout << " r1 = " << r1.to_string() << std::end1;
std::cout << " r2 = " << r2.to_string() << std::end1;
std::cout << " v2 = " << v2.to_string() << std::end1;
std::cout << " v2 = " << v2.to_string() << std::end1;
std::cout << " v2 = " << v2.to_string() << std::end1;
std::cout << " v3 = " << r3.to_string() << std::end1;</pre>
```

The output of above code is

```
Juniore to 🐪 Life S 🤳 Warning. 🔒 US 🔊 16.
Vivado HLS Console
In file included from D:/Xilinx/Vivado/2020.1/include/hls_fpo.h:186:0
                from D:/Xilinx/Vivado/2020.1/include/hls_half.h:44
                from D:/Xilinx/Vivado/2020.1/include/etc/ap_private
               from D:/Xilinx/Vivado/2020.1/include/ap_common.h:641
                from D:/Xilinx/Vivado/2020.1/include/ap_int.h:54,
                from ../../bitprecision initialisation.h:4,
                from ../../bitprecision initialisation-tb.h:3,
                from ../../bitprecision initialisation-tb.cpp:1:
D:/Xillinx/Vivado/2020.1/include/floating point v7 0 bitacc cmodel.h:1
#define GMP_LIBGMP_DLL 1
v1 = 0b1000001
r1 = 0b01000000
r2 = 0b1000001000000
v2 = 0b1000001
r3 = 0b1111111111100
INFO: [SIM 211-1] CSim done with 0 errors.
Finished C simulation.
```