```cpp
 1: // $Id: maxvalues.cpp,v 1.1 2018-01-22 14:07:16-08 - - $
 2:
 3: #include <iostream>
 4: #include <locale>
 5: #include <string>
 6: using namespace std;
 7:
 8: struct comma_numpunct: public numpunct<char> {
 9:    string digits;
10:    comma_numpunct (const string& dig = "\3"): digits(dig) {}
11:    virtual char do_thousands_sep() const { return ','; }
12:    virtual string do_grouping() const { return digits; }
13: };
14:
15: template <typename unsigned_t>
16: void print (const string& type) {
17:    unsigned_t max = -1LL;
18:    unsigned long long maxx = max;
19:    cout << endl << type << ":" << endl;
20:    cout << "0" << oct << maxx << endl;
21:    cout << dec << maxx << endl;
22:    cout << "0x" << uppercase << hex << maxx << endl;
23: }
24:
25: #define PRINT(X) print<X> (#X);
26:
27: int main() {
28:    cout.imbue (locale (locale(), new comma_numpunct()));
29:    PRINT (unsigned char);
30:    PRINT (unsigned short);
31:    PRINT (unsigned int);
32:    PRINT (unsigned long);
33:    PRINT (unsigned long long);
34:    PRINT (size_t);
35:    return 0;
36: }
37:
38: //TEST// ./maxvalues >maxvalues.lis 2>&1
39: //TEST// mkpspdf maxvalues.ps maxvalues.cpp* maxvalues.lis
40:
```

```
 1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting maxvalues.cpp
 2: checksource maxvalues.cpp
 3: ident maxvalues.cpp
 4: maxvalues.cpp:
 5:     $Id: maxvalues.cpp,v 1.1 2018-01-22 14:07:16-08 - - $
 6: cpplint.py.perl maxvalues.cpp
 7: Done processing maxvalues.cpp
 8: g++ -g -O0 -Wall -Wextra -Werror -Wpedantic -Wshadow -fdiagnostics-color
=never -std=gnu++17 -Wold-style-cast maxvalues.cpp -o maxvalues -lm
 9: rm -f maxvalues.o
10: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished maxvalues.cpp
```

```
 1:
 2: unsigned char:
 3: 0377
 4: 255
 5: 0xFF
 6:
 7: unsigned short:
 8: 0177,777
 9: 65,535
10: 0xF,FFF
11:
12: unsigned int:
13: 037,777,777,777
14: 4,294,967,295
15: 0xFF,FFF,FFF
16:
17: unsigned long:
18: 01,777,777,777,777,777,777,777
19: 18,446,744,073,709,551,615
20: 0xF,FFF,FFF,FFF,FFF,FFF
21:
22: unsigned long long:
23: 01,777,777,777,777,777,777,777
24: 18,446,744,073,709,551,615
25: 0xF,FFF,FFF,FFF,FFF,FFF
26:
27: size_t:
28: 01,777,777,777,777,777,777,777
29: 18,446,744,073,709,551,615
30: 0xF,FFF,FFF,FFF,FFF,FFF
```