

1)

```
Eshell V13.2.2.5 (abort with ^G)
1> listgen:gen_users("us", 4).
["us1","us2","us3","us4"]
2> listgen:pos_int_only([2,3,4,"er1",lol,-3,-4,12]).
[2,3,4,12]
3> listgen:get_rand_list(7, 30).
[11,8,9,5,18,15,11]
```

2)

<<X:4,Y:2>> = <<42:6>>. – Корректно

X – 1010 = 10

Y – 10 = 2

<<C:4,D:4>> = <<1998:6>>. – НЕ корректно

1998 не помещается в 6 бит

<<C:4,D:2>> = <<1998:8>>. – Корректно

X – 1110 = 14

Y – 11 = 3

3)

```
4> ipv4_parser:parse_ipv4_header(<<69,0,0,60,123,45,0,0,64,6,0,0,192,168,1,1,192,168,1,2>>).
#ipv4_header {
  version = 4,
  ihl = 5,
  tos = 0,
  total_len = 60,
  ident = 31533,
  flags = 0,
  frag_offset = 0,
  ttl = 64,
  proto = tcp,
  checksum = 0,
  src_addr = {192,168,1,1},
  dst_addr = {192,168,1,2},
  option = undefined
}
ok
5> ipv4_parser:parse_ipv4_header(<<4:4, 6:4, 0:8, 0:3>>).
** exception throw: {error,invalid_packet}
   in function ipv4_parser:parse_ipv4_header/1 (ipv4_parser.erl, line 51)
6> ipv4_parser:parse_ipv4_header(<<6:4, 6:4, 0:8, 232:16, 0:16, 0:3, 0:13, 0:8, 0:8, 0:16, 0:32, 0:32, 0:32, "hello">>).
** exception throw: {error,unsupported_version,6}
   in function ipv4_parser:parse_ipv4_header/1 (ipv4_parser.erl, line 24)
7> ipv4_parser:parse_ipv4_header(<<4:4, 6:4, 0:8, 232:16, 0:16, 0:3, 0:13, 0:8, 0:8, 0:16, 0:32, 0:32, 0:32, "hello">>).
#ipv4_header {
  version = 4,
  ihl = 6,
  tos = 0,
  total_len = 232,
  ident = 0,
  flags = 0,
  frag_offset = 0,
  ttl = 0,
  proto = 0,
  checksum = 0,
  src_addr = {0,0,0,0},
  dst_addr = {0,0,0,0},
  option = 0
}
ok
8> ipv4_parser:parse_ipv4_header(<<4:4, ...>>).
* 1:38: syntax error before: '...'
8>
```

4)

```
{17,82,ipv4,{nonarp}},  
{16,86,ipv4,{nonarp}},  
{15,86,ipv4,{nonarp}},  
{14,42,arp,{arp,reply,"192.168.1.2","192.168.1.1"}},  
{12,86,ipv4,{nonarp}},  
{11,86,ipv4,{nonarp}},  
{10,86,ipv4,{nonarp}},  
{9,144,ipv4,{nonarp}},  
{8,76,ipv4,{nonarp}},  
{7,76,ipv4,{nonarp}},  
{6,76,ipv4,{nonarp}},  
{4,42,arp,{arp,request,"192.168.1.2","192.168.1.1"}},  
{3,92,ipv4,{nonarp}},  
{2,92,ipv4,{nonarp}},  
{1,92,ipv4,{nonarp}}]
```