```
--------------------------- 32 bits ---------------------------
```

| 8 - bits | 8 - bits | 8 - bits | 8 - bits |
|:---:|:---:|:---:|:---:|
| □□□□□□□□ | □□□□□□□□ | □□□□□□□□ | □□□□□□□□ |
| 0 - 255 | 0 - 255 | 0 - 255 | 0 - 255 |

The ip address is written in numbers separated by . for each octet. so the
min ip address is : 0.0.0.0
max ip address is : 255.255.255.255

min number from 8 bits:

```
0       0       0       0       0       0       0       0
*       *       *       *       *       *       *       *
2^7 + 2^6 + 2^5 + 2^4 + 2^3 + 2^2 + 2^1 + 2^0  = 0
```

```
--------------------------------------------------
```

max number from 8 bits:

```
1       1       1       1       1       1       1       1
*       *       *       *       *       *       *       *
2^7 + 2^6 + 2^5 + 2^4 + 2^3 + 2^2 + 2^1 + 2^0  = 255
128     64      32      16      8       4       2       1
```