

Welcome Cyber#1

Reader: reader.codaisseur.com

Slack: codaisseur-school.slack.com

Discord: <https://discord.gg/qyehPh>

Today's schedule

19:00 – 20:00

☐ **Checksums**

20:00 – 21:00

☐ **The feedback hour** (by Eszter)

21:00 – 21:30

☐ **Discord** (for real)

Checksums...

- Intro into **hex**
- Keyboards
- **ASCII** table
- Message **decoding**
- Check**Check**Check
- Checksum in tcp/ip

What was hex_{adecimal} again?

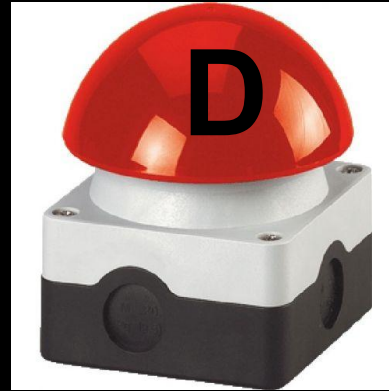
Numbering system

0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F

0-15 (**16-base**)

Ever wondered how your
keyboard works?

(104) switches...



(洪德維爾) switches...



醇 汇 灶 峽 難 金 尸

Nerdstuff...
(Linux only)

Cat /dev/input/event0
(Linux only)

xev
(Linux only)

ASCII-table

<http://www.asciitable.com/>

Message for you...

Name	Message
Jeroen	0x68 0x65 0x6C 0x6C 0x6F 0x20 0x6A 0x65 0x72 0x6F 0x65 0x6E 0x20 0x20 0x20 0x20
Wouter	0x68 0x65 0x6C 0x6C 0x6F 0x20 0x77 0x6F 0x75 0x74 0x65 0x72 0x20 0x20 0x20 0x20
Prawesh	0x68 0x69 0x20 0x70 0x72 0x61 0x77 0x65 0x73 0x68 0x20 0x20 0x20 0x20 0x20 0x20
Filipe	0x46 0x69 0x6C 0x69 0x70 0x65 0x20 0x63 0x6F 0x6F 0x6C 0x20 0x64 0x75 0x64 0x65
Marcin	0x67 0x20 0x65 0x76 0x65 0x6E 0x69 0x6E 0x67 0x20 0x6D 0x61 0x72 0x63 0x69 0x6E
Patrick	0x79 0x6F 0x6F 0x6F 0x6F 0x6F 0x77 0x20 0x70 0x61 0x74 0x72 0x69 0x63 0x6B
Pepijn	0x73 0x74 0x6F 0x70 0x6D 0x6F 0x74 0x69 0x6F 0x6E 0x20 0x70 0x65 0x70 0x79 0x6E
Prudhvi	0x70 0x72 0x75 0x64 0x68 0x76 0x69 0x20 0x6D 0x31 0x20 0x61 0x70 0x70 0x6C 0x65
Harish	0x77 0x65 0x6C 0x63 0x6F 0x6D 0x65 0x20 0x68 0x61 0x72 0x69 0x73 0x68 0x20 0x20
Yabou	0x59 0x61 0x62 0x6F 0x75 0x20 0x69 0x73 0x20 0x61 0x77 0x65 0x73 0x6F 0x6D 0x65
Yann	0x68 0x61 0x63 0x6B 0x65 0x72 0x62 0x6F 0x79 0x20 0x79 0x61 0x6E 0x6E 0x20 0x20
Yvonne	0x68 0x69 0x20 0x59 0x76 0x6F 0x6E 0x6E 0x65 0x20 0x77 0x65 0x6C 0x6B 0x6F 0x6D
Camelia	0x48 0x61 0x43 0x6B 0x45 0x52 0x20 0x47 0x69 0x52 0x6C 0x34 0x6C 0x69 0x66 0x65
Willemijn	0x6A 0x73 0x20 0x70 0x72 0x6F 0x20 0x77 0x69 0x6C 0x6C 0x65 0x6D 0x69 0x6A 0x6E
Tjitze	0x57 0x65 0x6C 0x63 0x6F 0x6D 0x65 0x20 0x54 0x6A 0x69 0x74 0x7A 0x65 0x20 0x20
Bozana	0x48 0x6F 0x77 0x64 0x79 0x20 0x73 0x75 0x6E 0x73 0x68 0x69 0x6E 0x65 0x20 0x20
Richard	0x6C 0x65 0x74 0x73 0x20 0x70 0x72 0x6F 0x74 0x65 0x63 0x74 0x20 0x6D 0x6F 0x6D
Shangram	0x68 0x6F 0x77 0x64 0x79 0x20 0x73 0x68 0x61 0x6E 0x67 0x72 0x61 0x6D 0x21 0x20
Ximena	0x62 0x72 0x61 0x6E 0x64 0x20 0x6E 0x65 0x77 0x20 0x6D 0x61 0x63 0x20 0x20 0x20
Eszter	0x6C 0x65 0x74 0x73 0x20 0x74 0x61 0x6B 0x65 0x20 0x62 0x72 0x65 0x61 0x6B 0x21

Did you manage to decode..

Correctly!!

Checksums...

**Check if content arrived
correctly**

0x63 0x6F 0x64 0x61 0x69 0x73 0x73 0x65 0x75 0x72 0x2E 0x63 0x6F 0x6D 0x21 0x20

63 6F 64 61 69 73 73 65 75 72 2E 63 6F 6D 21 20

0x63 0x6F 0x64 0x61 0x69 0x73 0x73 0x65 0x75 0x72 0x2E 0x63 0x6F 0x6D 0x21 0x20

63 6F 64 61 69 73 73 65 75 72 2E 63 6F 6D 21 20

c o d a i s s e u r . c o m ! <space>

0x63 0x6F 0x64 0x61 0x69 0x73 0x73 0x65 0x75 0x72 0x2E 0x63 0x6F 0x6D 0x21 0x20

63 6F 64 61 69 73 73 65 75 72 2E 63 6F 6D 21 20

c o d a i s s e u r . c o m ! <space>

Convert to decimal to calculate sum

99 111 100 97 105 115 115 101 117 114 46 99 111 109 33 32

0x63 0x6F 0x64 0x61 0x69 0x73 0x73 0x65 0x75 0x72 0x2E 0x63 0x6F 0x6D 0x21 0x20

63 6F 64 61 69 73 73 65 75 72 2E 63 6F 6D 21 20

c o d a i s s e u r . c o m ! <space>

Convert to dec to calculate sum

99 111 100 97 105 115 115 101 117 114 46 99 111 109 33 32

sum = 1504

sum (in hex)= 0x5E0

**0x63 0x6F 0x64 0x61 0x69 0x73 0x73 0x65
0x75 0x72 0x2E 0x63 0x6F 0x6D 0x21 0x20 0x5E0**

Checksums in tcp/ip (using wireshark)

In tcp/ip..

«version»«length»«TTL»«Protocol»«checksum»«source»«destination»

In tcp/ip..

«version»«length»«TTL»«Protocol»«checksum»«source»«destination»

«version»«length»«TTL»«Protocol»«0x0000»«source»«destination»

In tcp/ip..

⟨version⟩⟨length⟩⟨TTL⟩⟨Protocol⟩⟨checksum⟩⟨source⟩⟨destination⟩

⟨version⟩⟨length⟩⟨TTL⟩⟨Protocol⟩⟨0x0000⟩⟨source⟩⟨destination⟩

⟨version⟩⟨length⟩⟨TTL⟩⟨Protocol⟩⟨0xFFFF⟩⟨source⟩⟨destination⟩

How did I do?
(Feedback by Eszter)

DISCORD
(Finally)

The End