## CS50 presents <br> CS50x Puzzle Day 2020 <br> with special thanks to our friends at Facebook

- This packet contains 8 puzzles, each of which is independent of the others.
- The answer to each puzzle is a single word or name in English, unless otherwise specified.
- You may use the Internet and any other resources at your disposal.
- You are encouraged (but not required) to work on a team with I, 2, or 3 classmates or friends. But you must NOT gather in person, unless you already live together. You must instead collaborate online via chat, voice, or video. Doctors' orders! Teams discovered to have gathered in person will be disqualified and ineligible for certificates.
- Submit your answers at cs 50.1 ly/submit before $23: 59$ on Monday, 6 April 2020. If working on a team, only one member from your team should submit.
- See cs50.ly/puzzles for all rules.
- Have fun and good luck!


## Symbolism

| po | n'd | jam | ena | ki | war | jak | bo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| rt | tal | ye | mo | ev | saw | arta | go |
| Iou | lin | rev | sc | ab | u | ja | t |
| is | n | an | OW | li | m | a | á |

2nd from the Southernmost

1st from the Northernmost

3rd from the Closest to Sea Level

Answer:
Page I

Secret Message from US

# YJR SMDERT YP YJOD [IXX;R OD YJR 

## DOC VJSTSVYRT MS,R GPT YJR ,PDY

VP,,PM LRUNPSTF ;SUPIY

## Sets

CZA: RTRDSHGMRDP<br>SDN:ZTTFFSSEN

TR:DKPCFGS

FOTR:FSGLGABM

DS:LGGSWP

RN:IVXLCD

SR:DDPVCCBR

AS:ATGCLVLSCAP
? ? ?: ? ? ? ? ?

## SEEDY Round

Watch later massively crowdfunded (2011)
Restaurant delivery service that has taken criticism for pay policies (2013)

Immersive coding bootcamp in New York and Chicago (2012)

The front page of the internet, and part of the first class (2005)

Custom clothing on-demand (2013)

Competitive coding challenges (2011)

## Sword Search

You get the point...

| A | W | A | K | 1 | I | H | T | 0 | H | S | L | D | Q | T | E | A | U | S | P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Y | G | S | S | D | F | C | 0 | F | 1 | R | E | G | U | E | K | T | L | G | U |
| A | S | A | 0 | L | Z | R | F | S | E | R | I | L | W | T | H | S | 1 | U | S |
| L | B | C | Z | $J$ | E | L | T | F | A |  | D | D | T | L | N | I | H | P | I |
| T | A | 0 | S | B | L | M | C | S | 1 | H | C | A | D | 0 | 0 | N | $J$ | N | Z |
| P | L | A | A | 1 | C | H | S | S | E | S | D | 0 | 0 | I | P | A | 0 | E | U |
| 1 | N | W | B | D | T | 1 | D | W | S | M | S | A | E | H | E | Y | E | W | E |
| 0 | S | R | 1 | Z | W | S | E | I | H | A | N | D | E | R | S | S | W | A | O |
| L | A | 0 | A | H | A | L | C | H | 1 | T | L | T | F | F | H | V | 0 | Y | E |
| E | I | T | E | Q | K | T | N | I | V | H | B | T | N | 1 | S | T | A | A | B |
| E | 0 | M | T | L | A | 1 | H | U | D | S | E | 1 | B | 0 | S | D | D | S | R |
| W | E | M | E | H | 1 | T | C | 1 | N | N | V | L | N | U | S | C | N | U | E |
| A | $J$ | G | A | 1 | Z | H | A | N | E | B | T | A | A | T | C | S | A | E | 1 |
| U | G | G | L | T | A | D | I | U | S | S | 1 | M | B | L | T | L | H | 1 | H |
| U | D | R | R | L | S | 1 | O | K | N | R | E | S | 1 | E | Q | S | I | 0 | V |
| P | E | E | S | T | H | E | N | B | A | Y | 0 | C | H | N | T | 0 | P | 0 | E |
| 1 | A | E | T | U | I | L | E | X | E | C | D | L | 1 | E | E | V | 0 | D | S |
| A | U | P | 1 | 0 | D | 0 | E | G | R | E | B | M | E | A | L | F | S | S | E |
| T | L | M | 1 | H | Y | 0 | U | M | C | C | G | D | L | G | L | N | T | A | E |
| U | I | E | A | R | D | 0 | D | R | S | S | E | V | T | P | S | 0 | Z | L | E |

$$
4,5,6,7,7,7,7,8,9,9,10
$$

## Putting It All Together

| J | E | E | ZL |
| :---: | :---: | :---: | :---: |
| UZ | OT | HE | AN |
| H | Z |  |  |
| ST | E | T | HE |
| T | ISP | AWP | EO |
| T |  |  |  |
| ST | T | I | $\bigcirc$ |
| R | AM | SW | S |
|  | I |  | E |
| H | N | LA | H |
| LE | E | F | $\bigcirc$ |
|  | R | N | IG |
| NV | T |  |  |
| F | UZ |  |  |

Answer:

## A Poem for Hannah

Evil (Sin) is alive!
It covers inch by inch. No!
Tie ton to ground.
Protect. Pretext.
Or else a new order began.
A more Roman age.

Red Rowena be not proud.
Draw Caesar, erase a coward,
Find home, or harass selfless Sara.
Bring forth the maps.
DNA and Sam shall save us!

Delia, here we nine were ailed.
Here we suffered.
Here we fought and boxed.
Don't bob to nod,
Just duck and weave.

Estelle, the danger lurks,
To be prepared, set a room.
On no moor, Bates, will we be safe.

In the battle of commerce, science, and aesthetic
The lab's approach may yet prevail.
No, it's opposed!
Art sees trade's opposition.
Together they triumph.
Now sir, war is won.

## Stretch Out and Break Up to Get In

$$
\begin{aligned}
& \begin{array}{ll}
-\quad= & =\mathrm{a} \\
\ldots & =\mathrm{b}
\end{array} \\
& \overline{\overline{1}_{-}^{-}} \quad=\mathrm{c}
\end{aligned}
$$

$$
\begin{aligned}
& \text { L S S O } \begin{array}{r}
\text { R S M M I } \\
\end{array} \\
& \frac{R I I O}{C L H S} \\
& \begin{array}{lll}
\mathrm{L} & \mathrm{~S} \text { S O } \\
\hline \text { S M C S O }
\end{array} \\
& \begin{array}{llllll}
\text { S } & I & M & M & O & \\
\hline S & S & R & O & K \\
& R & I & I & O \\
\hline & M & C & R & K
\end{array}
\end{aligned}
$$

$$
a * b * c * d * e+f * g+\frac{b * d}{c}-e
$$

Answer:

