example of text-image scaffold

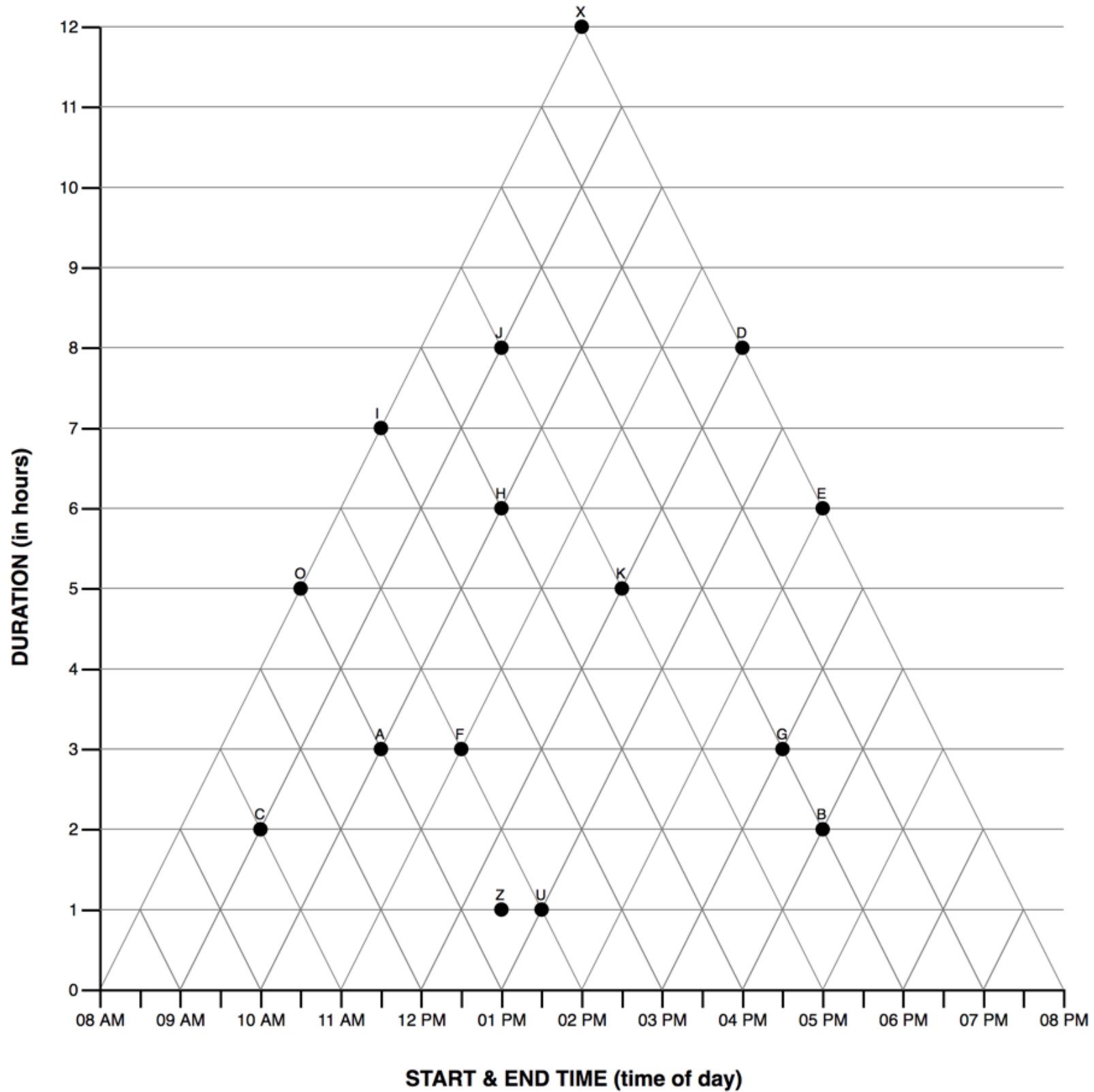Chart with axes: DURATION (in hours) / duration on the vertical axis (0 to 12), and START & END TIME (time of day) on the horizontal axis (08 AM to 08 PM). Dashed blue lines mark start (12 PM), end (05 PM), and duration (5 hours) connecting to point K. Data points labeled: X, J, D, I, H, E, O, C, K, F, G, C, A, U, B, Z.

big data set (Q 6-15)

DURATION (in hours) — vertical axis, values 0 through 12

START & END TIME (time of day) — horizontal axis, 08 AM through 08 PM

Data points:
- K: 02 PM, 10
- P: 05 PM, 9
- A: 01 PM, 8
- L: 04 PM, 7
- E: 11 AM, 6
- G: 01 PM, 6
- C: 02 PM, 5
- H: 04 PM, 5
- F: 12 PM, 4
- Z: 04 PM, 4
- I: 09 AM, 3
- B: 12 PM, 3
- O: 03 PM, 3
- J: 10 AM, 2
- X: 02 PM, 2
- N: 05 PM, 2
- D: 06 PM, 2
- M: 12 PM, 1

control data set (Q1-5 non-impasse)

impasse data set (Q1-5)

{ Control }

{ Impasse }

DURATION (in hours)

START & END TIME (time of day)

F   A
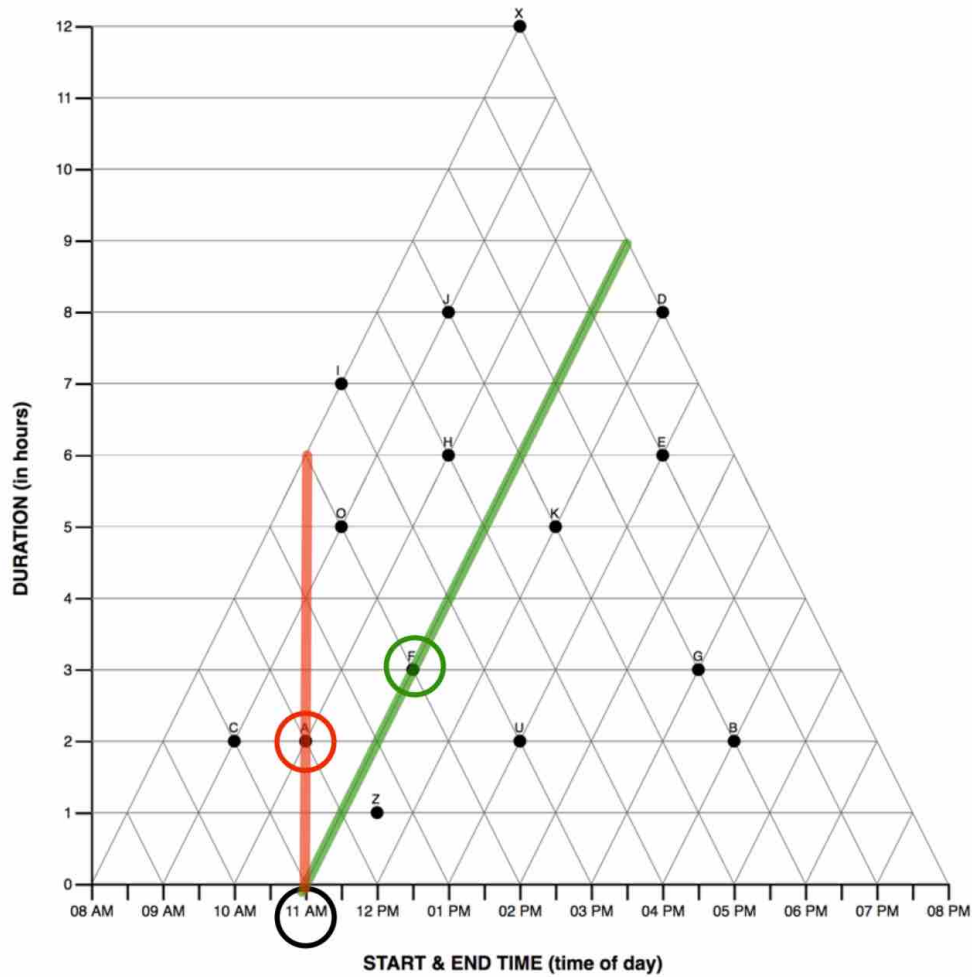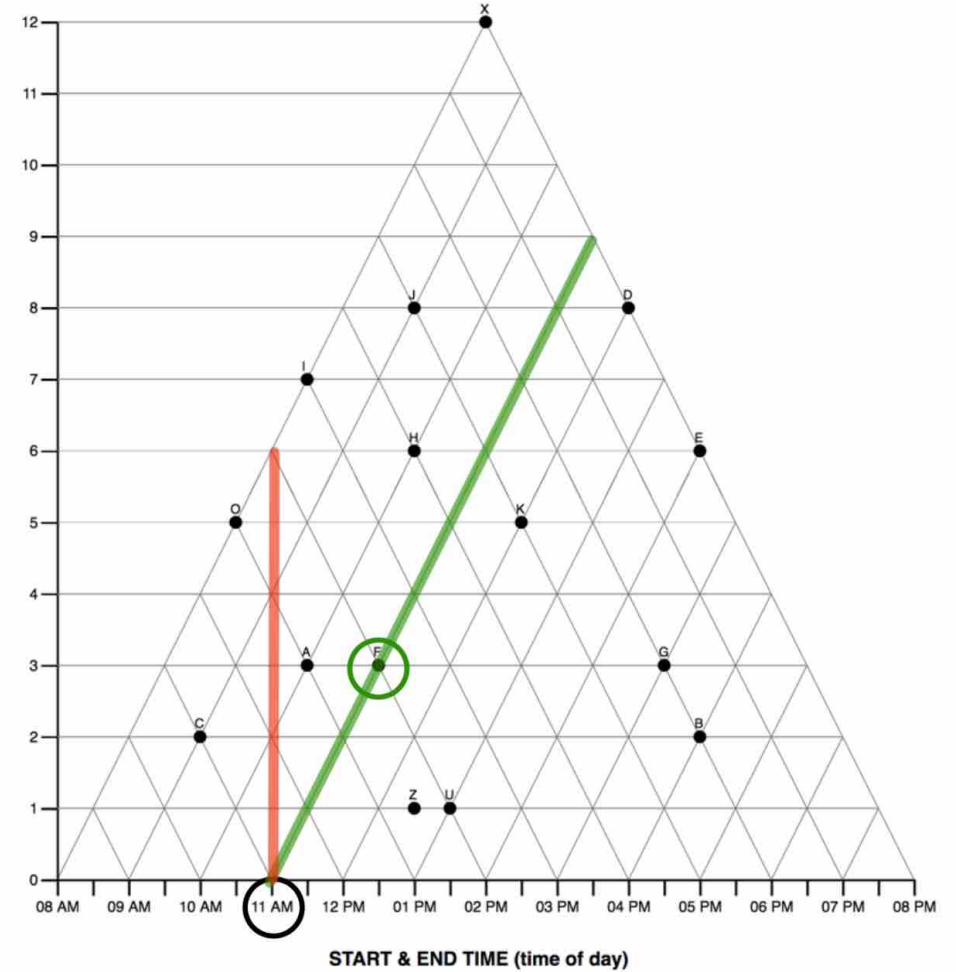
(start-time)
which shift(s) start at 11am?

F

(starts with)

Which shift starts with F?

G   B
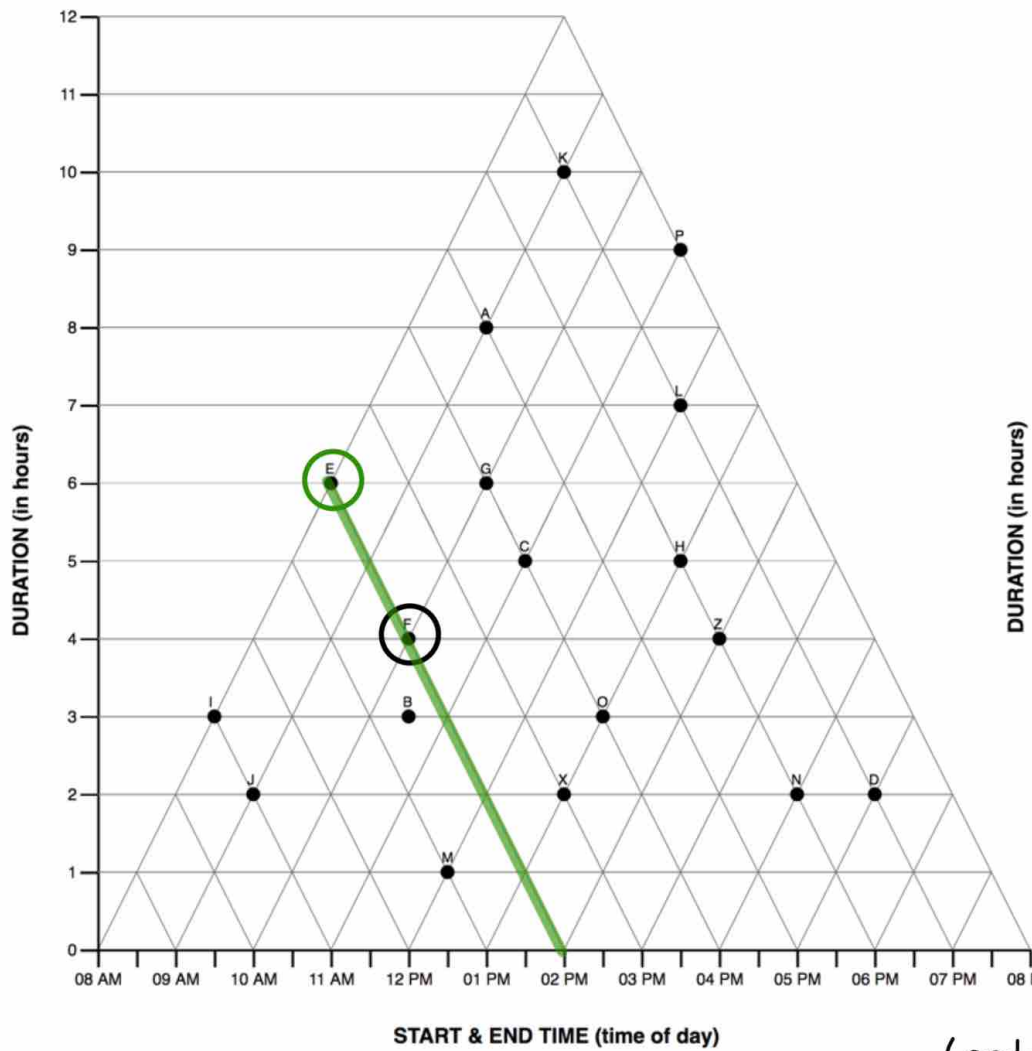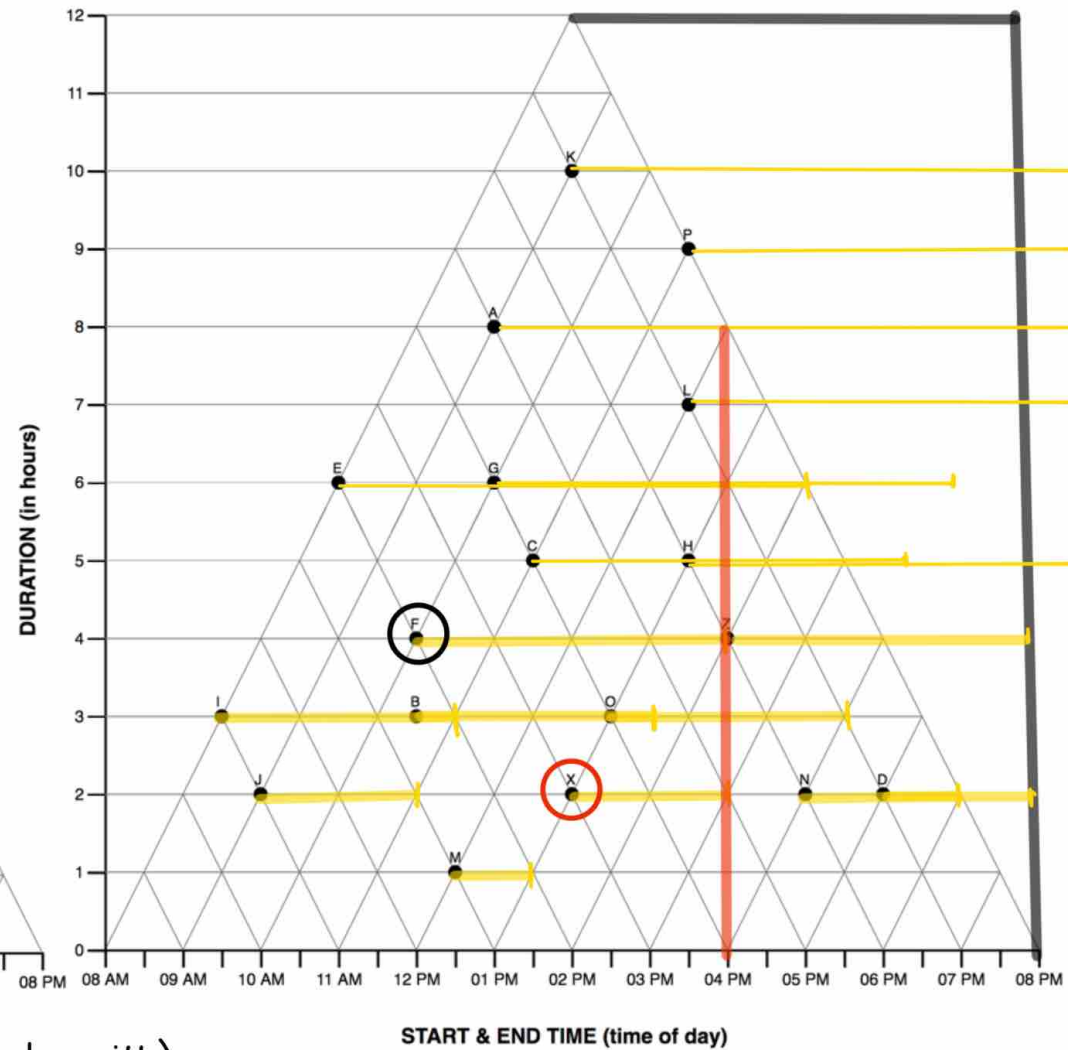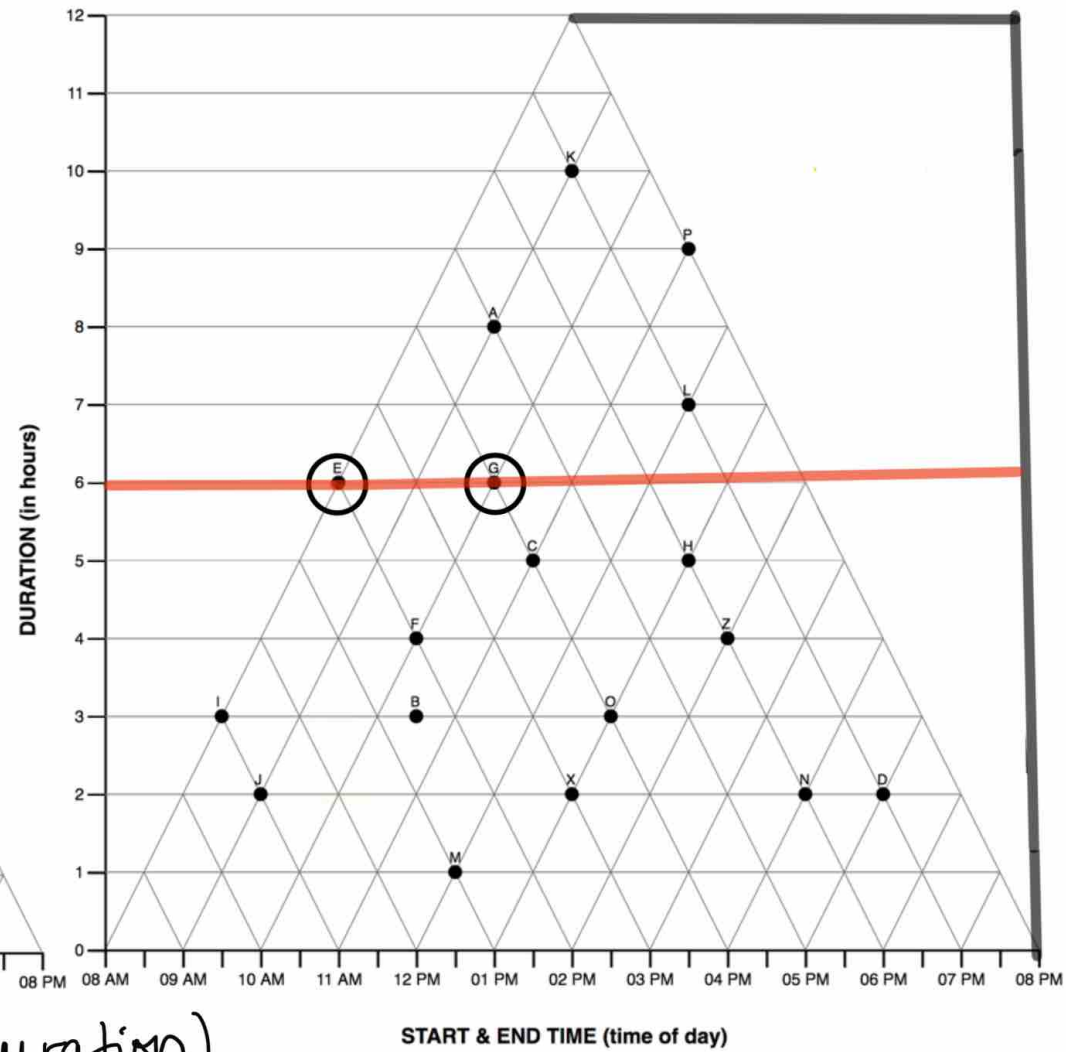
(ends-with)
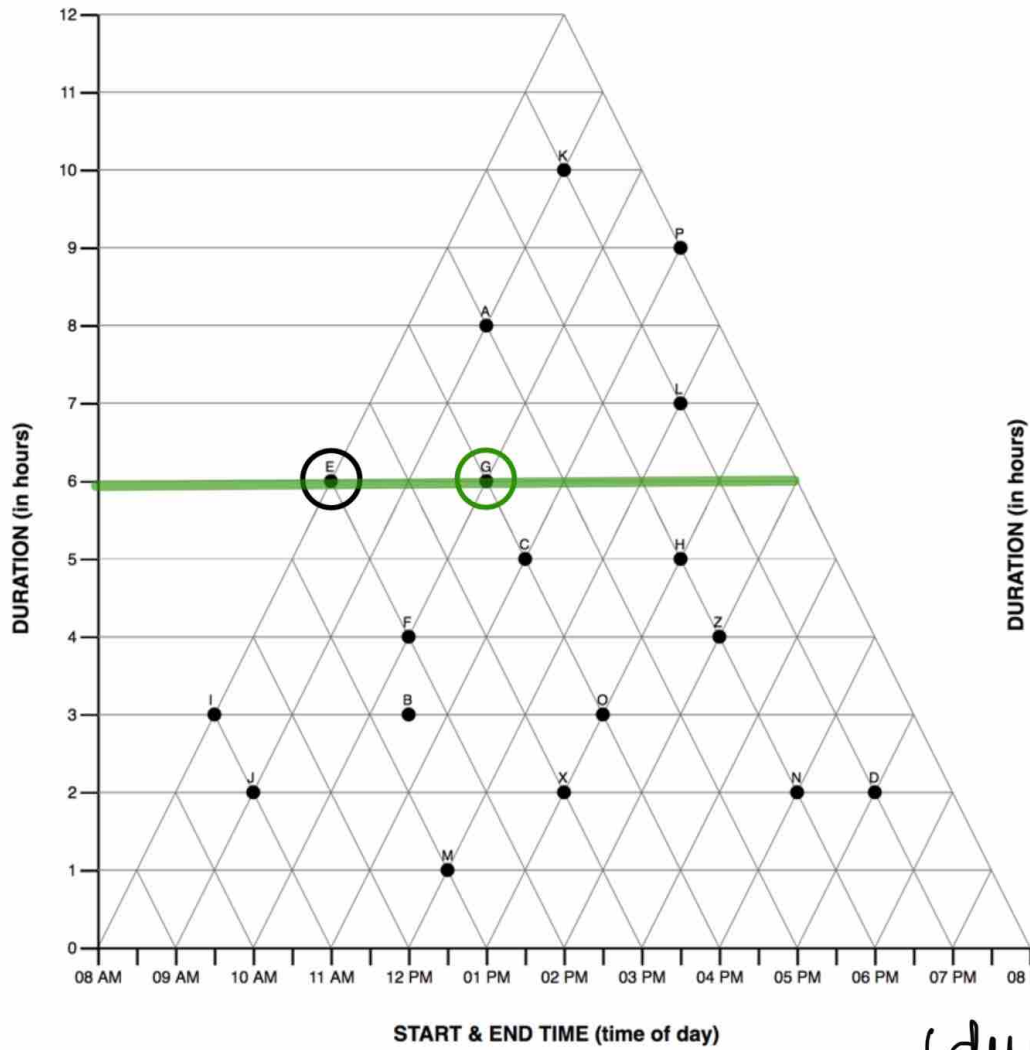
Which shift ends with F?

E   X   Z
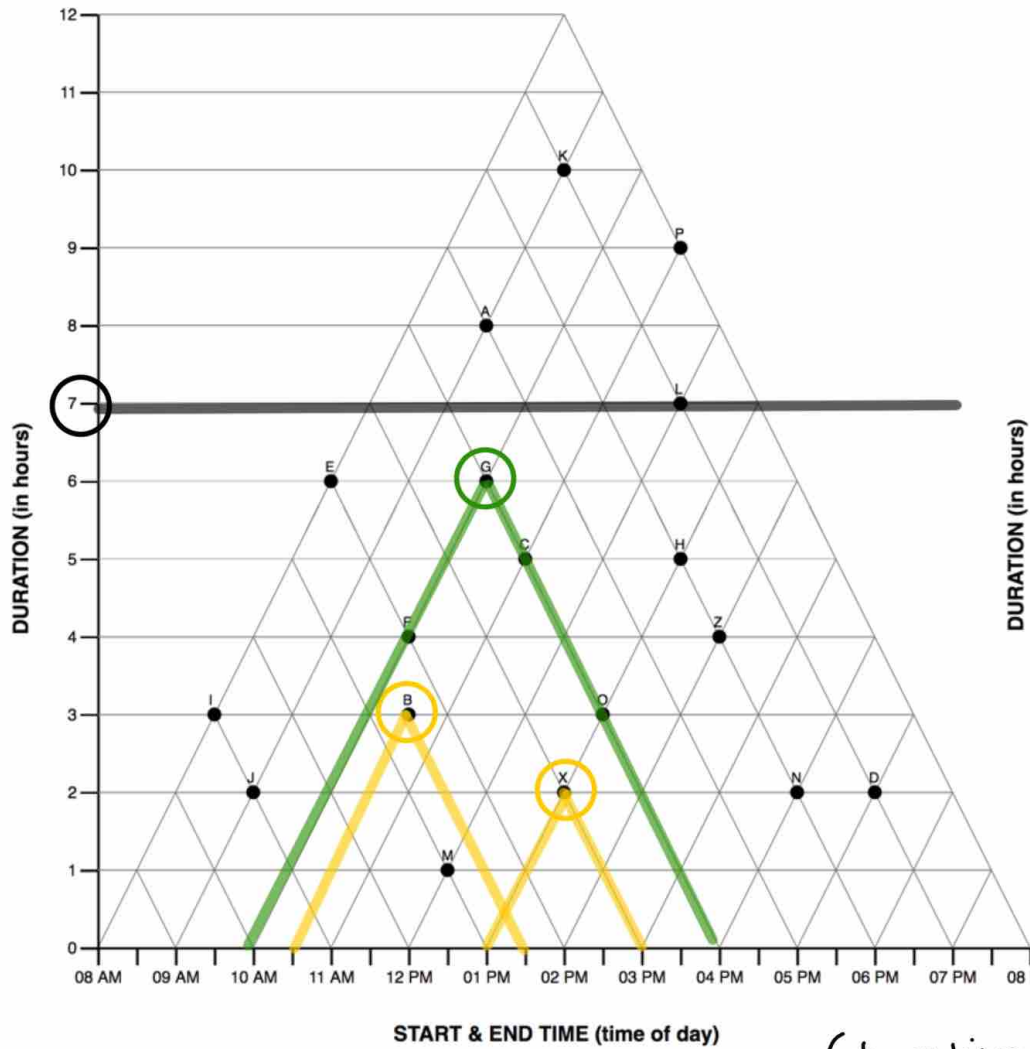
(duration)
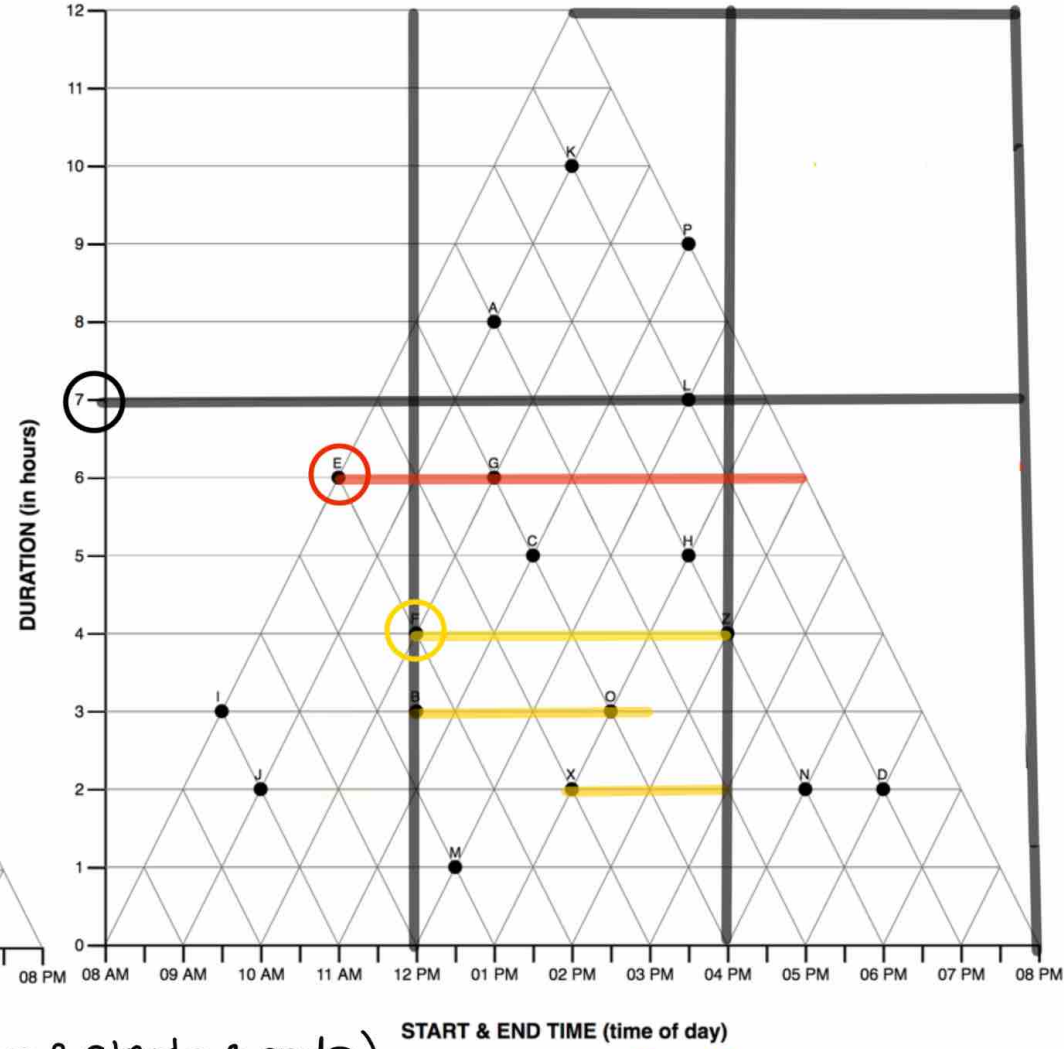
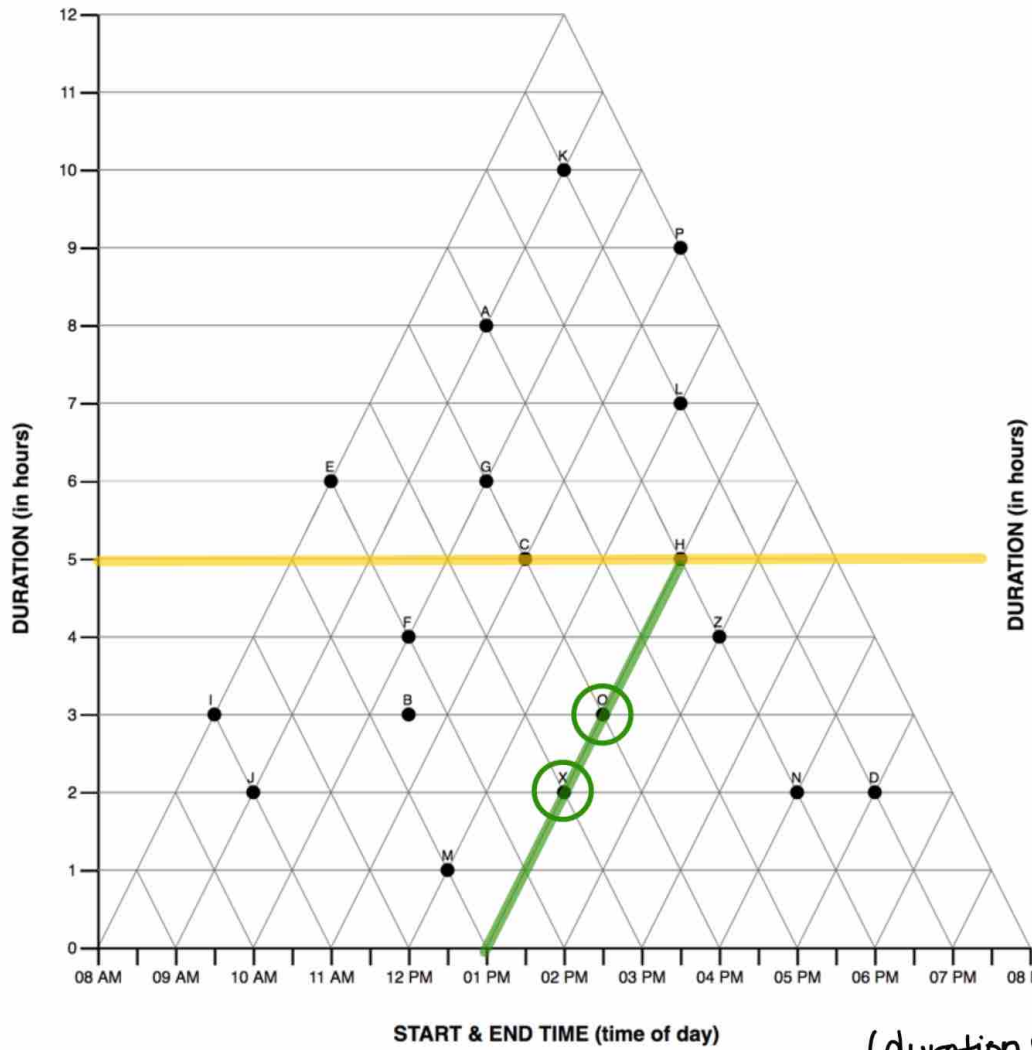Which shifts are six hours long?

E G   E G

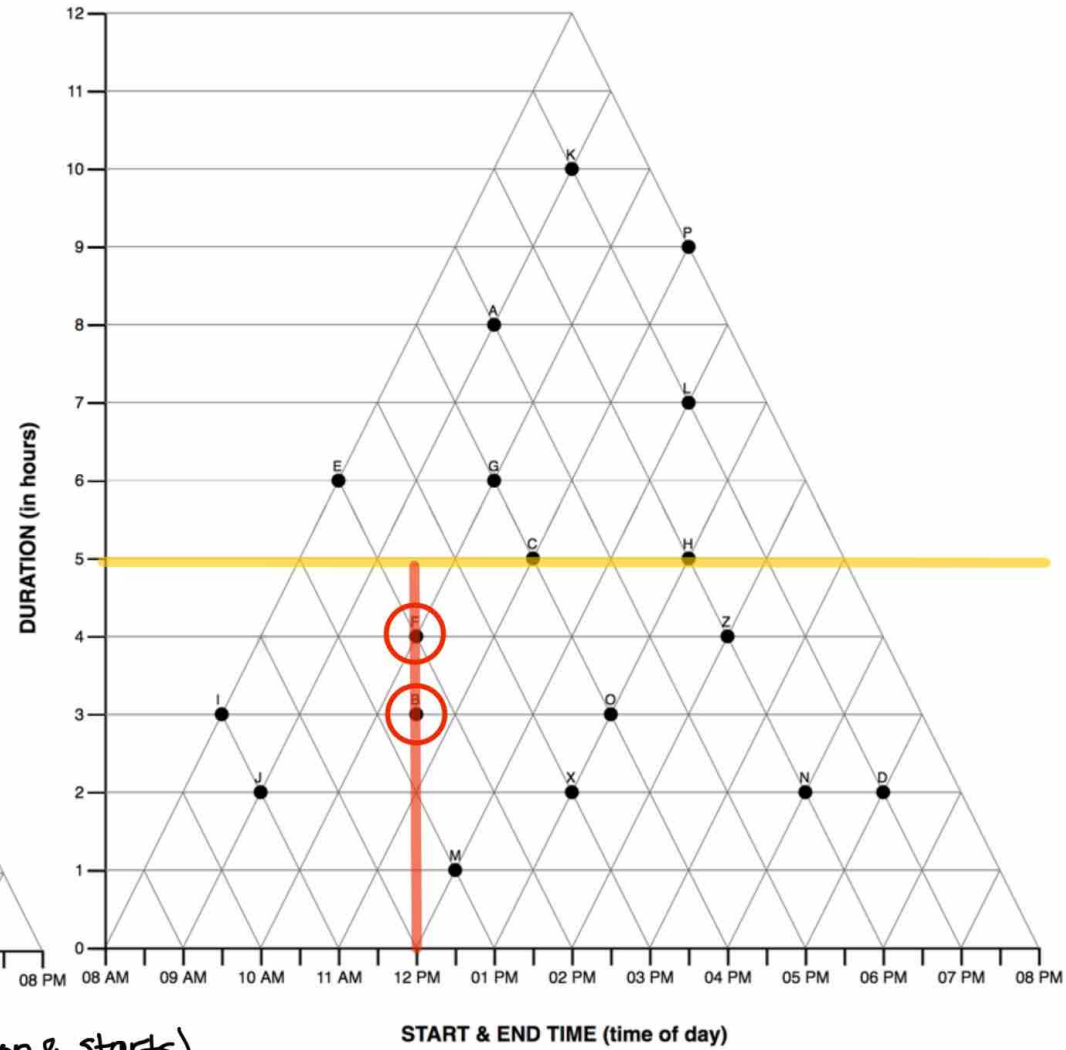(duration & startp. & endp.)

G

E F

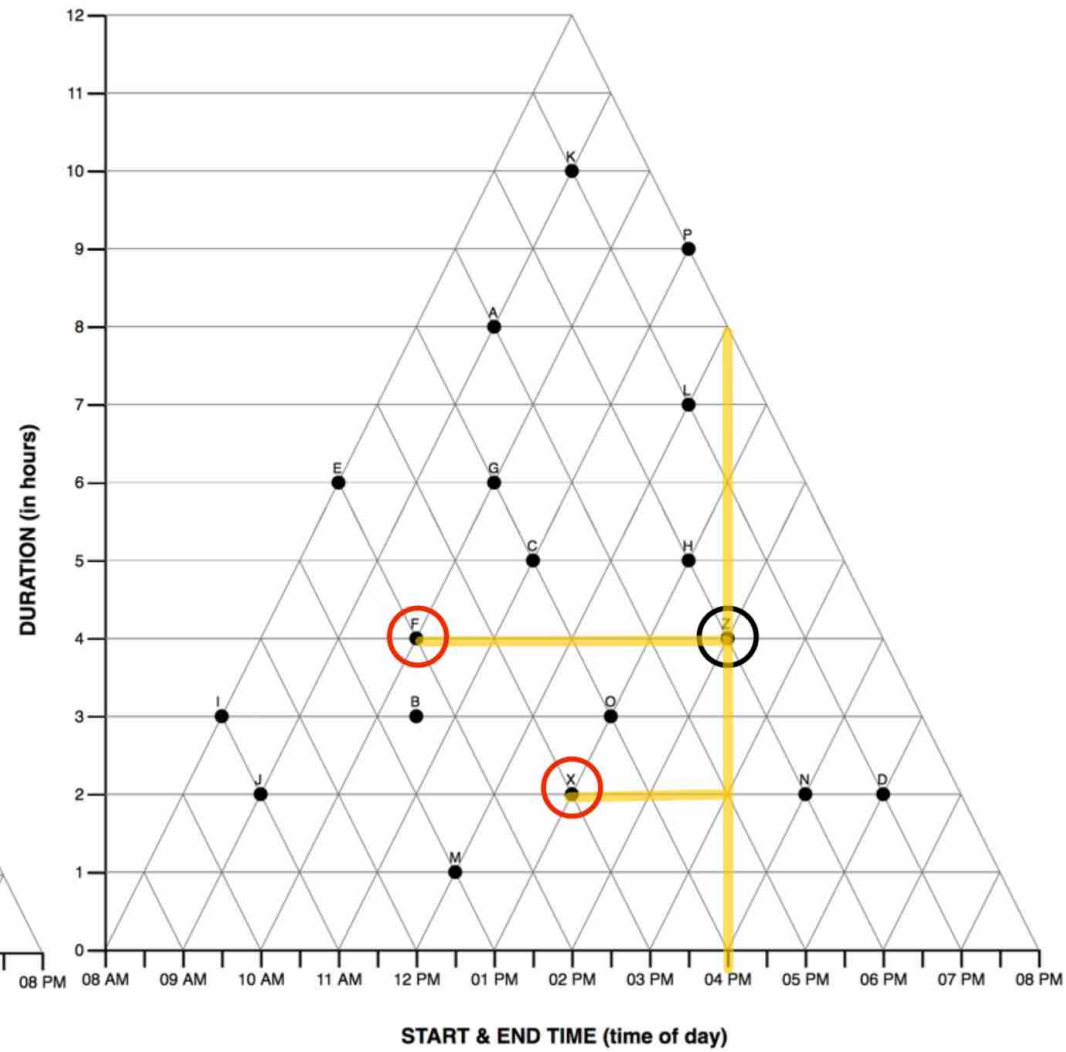Which shift under 7 hours long, starts before B & ends after X?
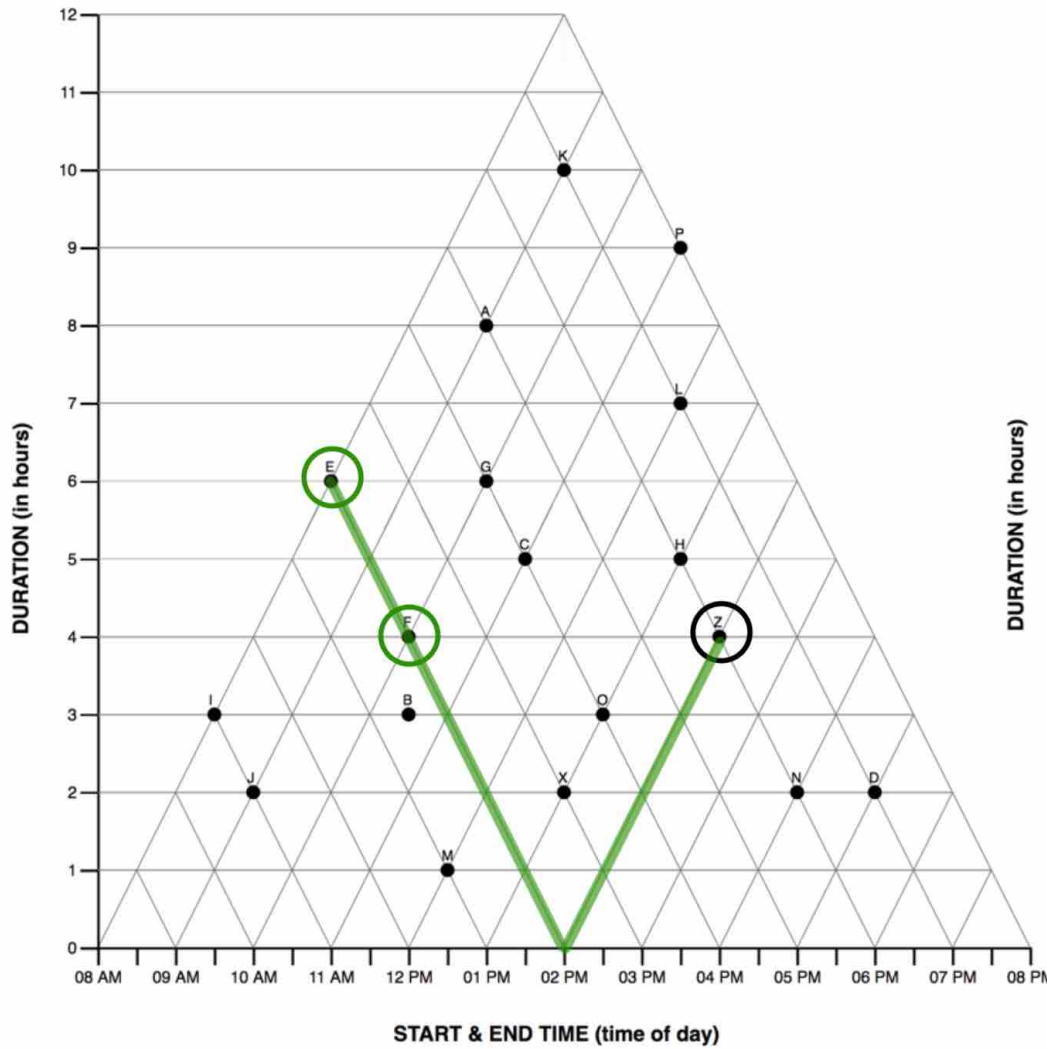
(duration & starts)

X, O

F, B

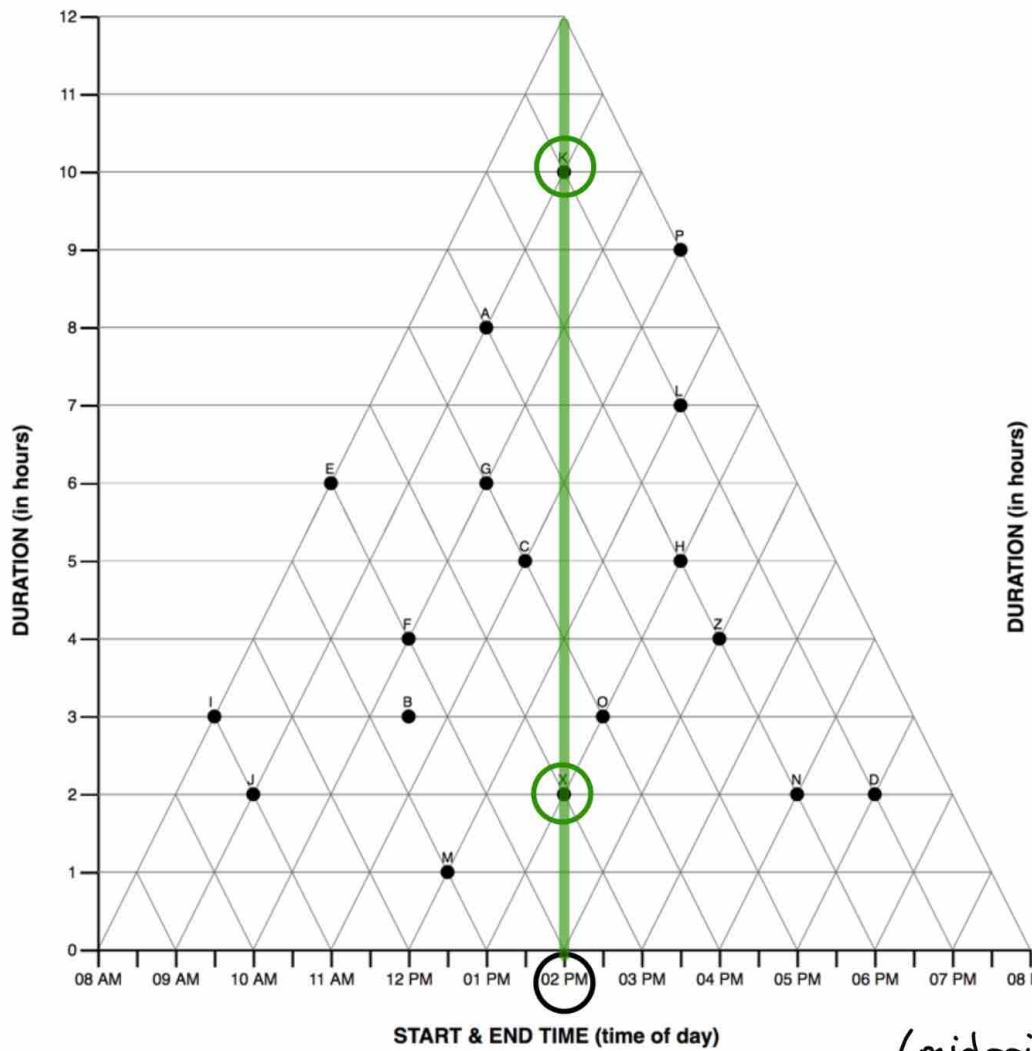Which 2 shifts less than 5 hours long start at the same time?
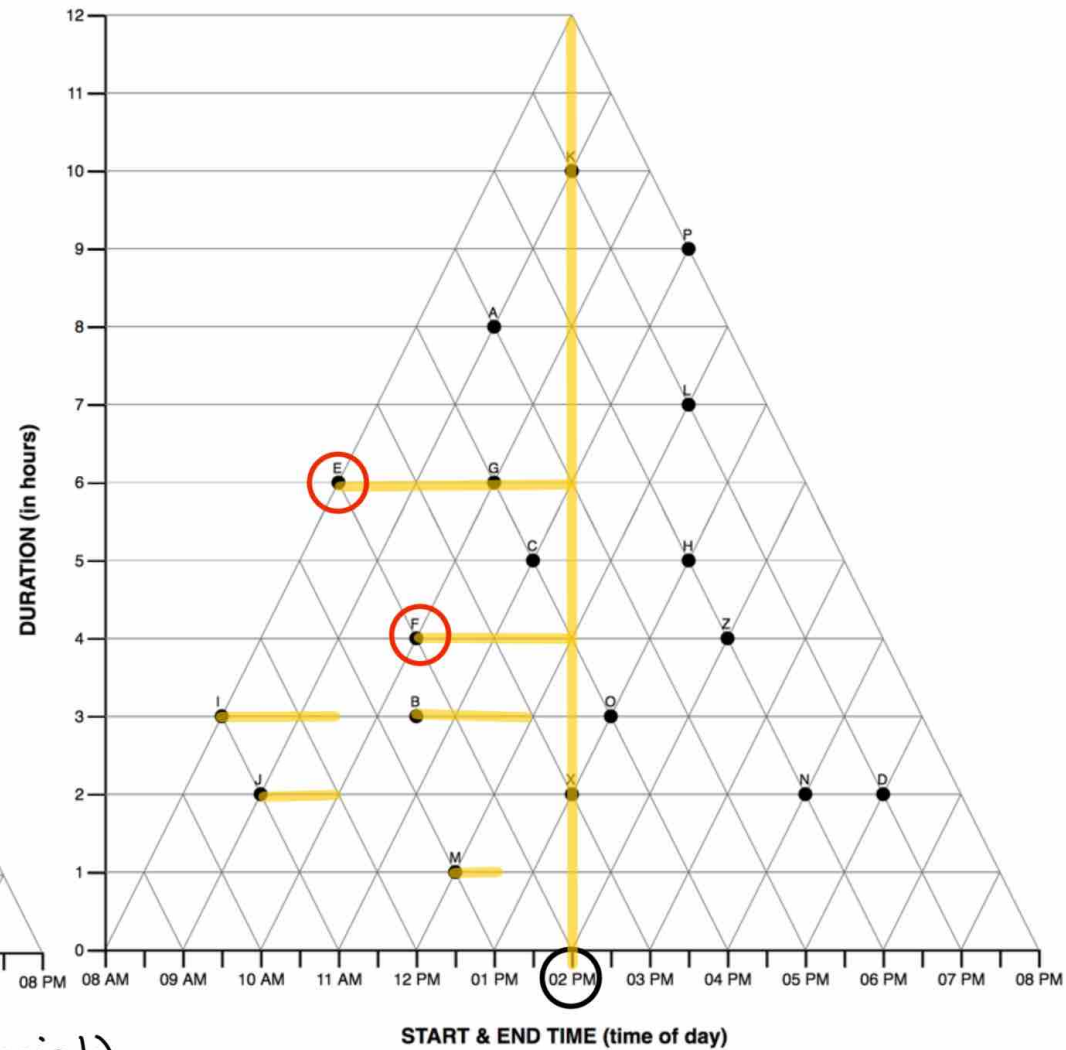
(meets)

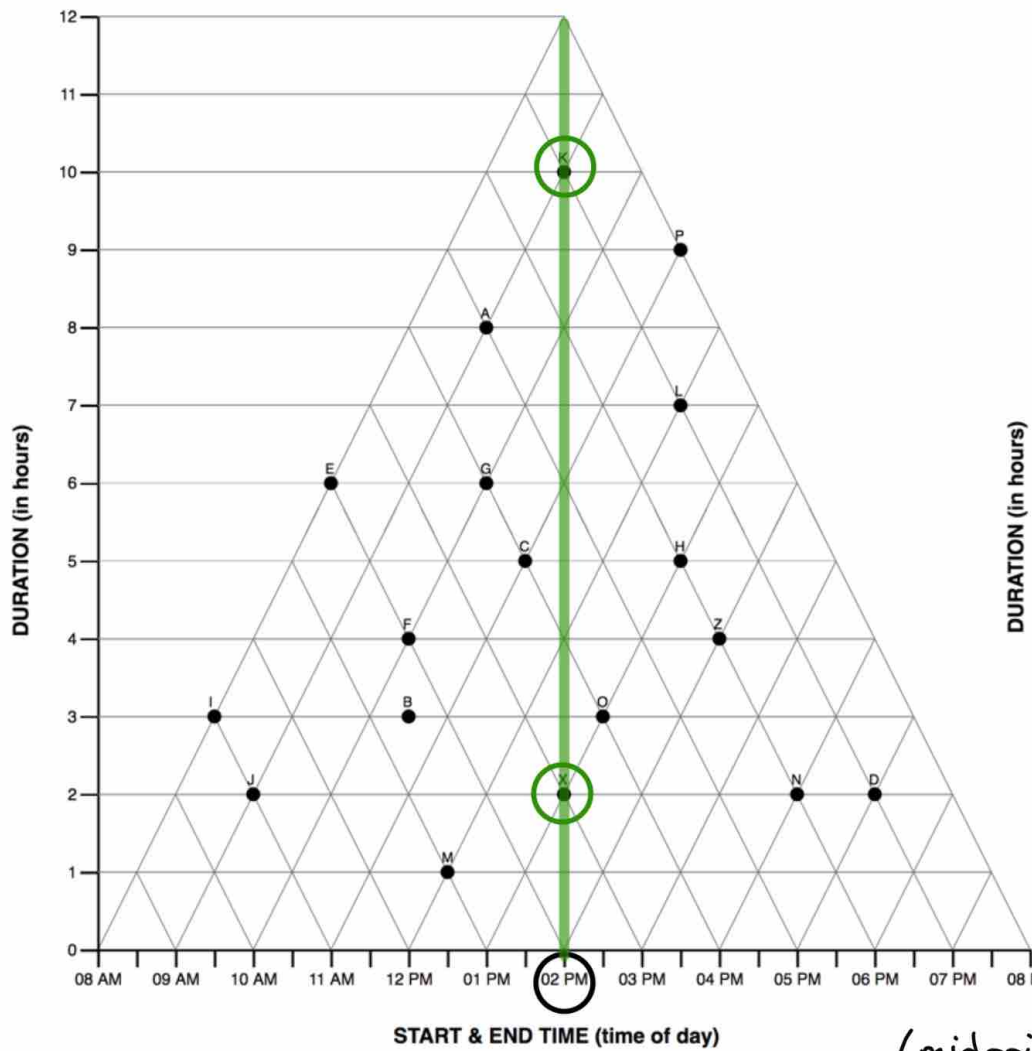Which 2 shifts end when Z begins?

F, E

F, X

(midpoint)

Coffee breaks happen halfway through a shift.
Which 2 shifts share a break at 2pm?
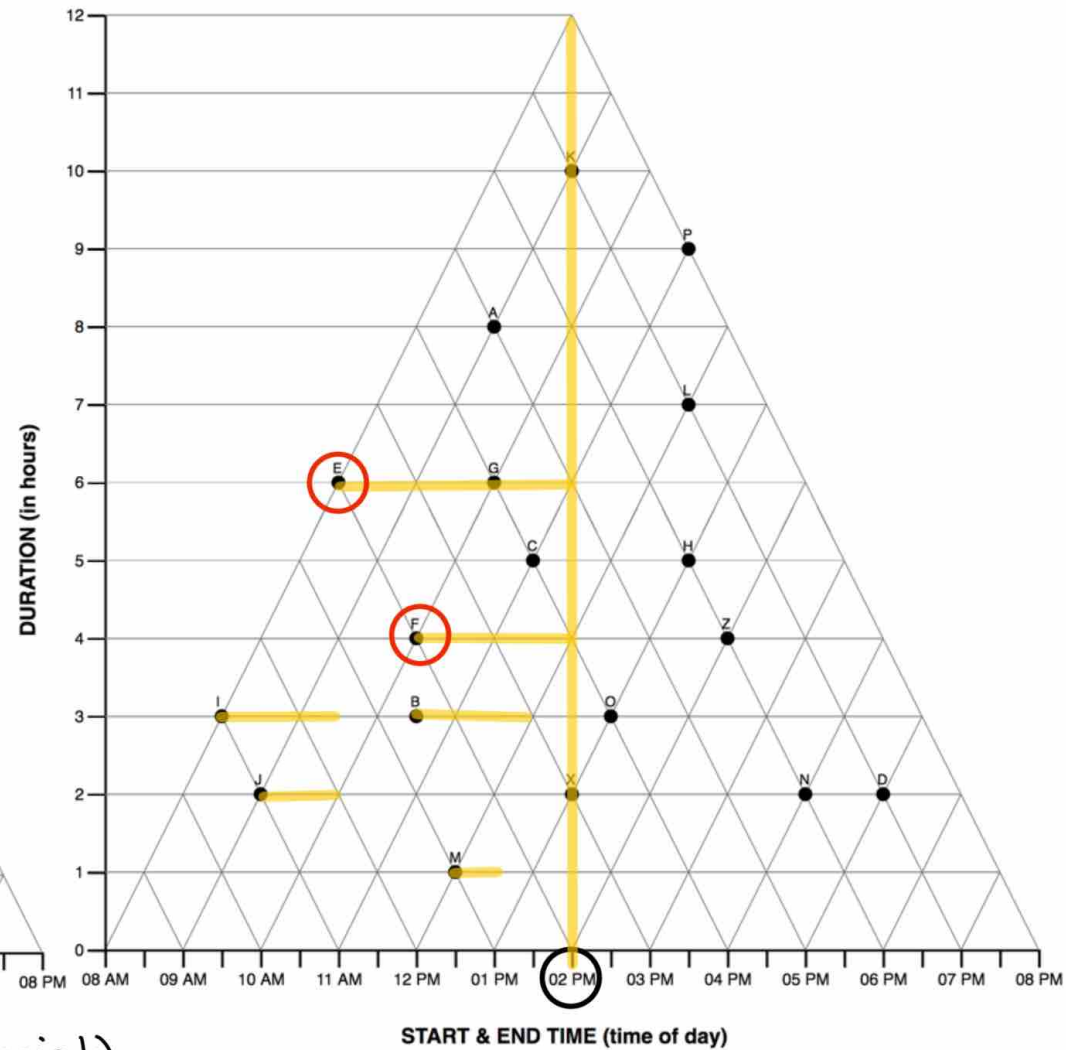
X, F

E, F   B

(midpoint)

Coffee breaks happen halfway through a shift.
Which 2 shifts share a break at 2pm ?
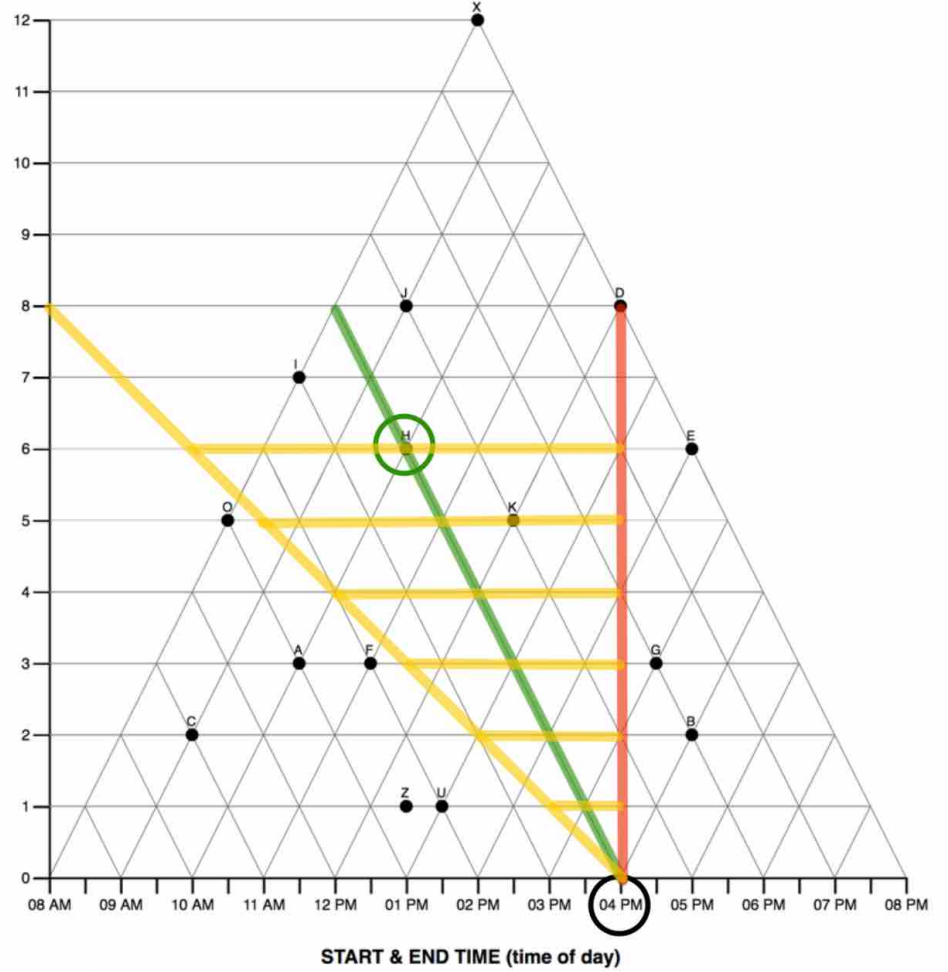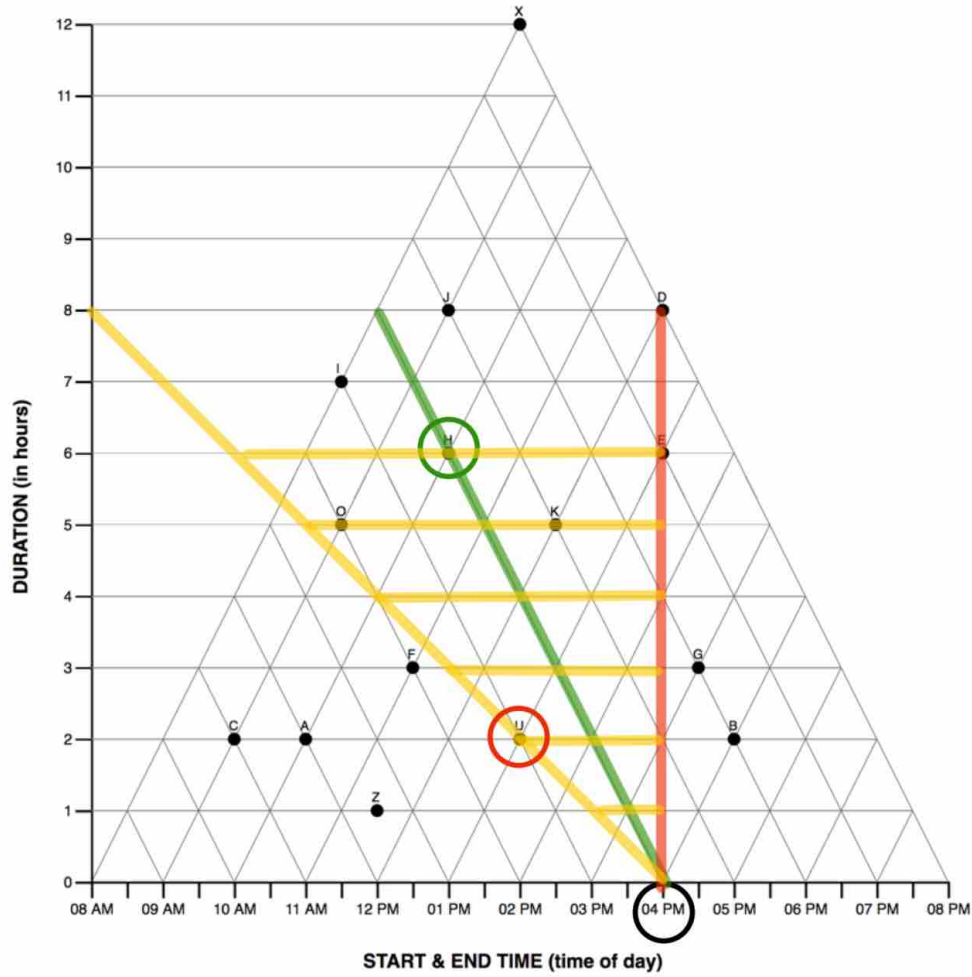
X, F

E, F   B

{ Control }

{ Impasse }
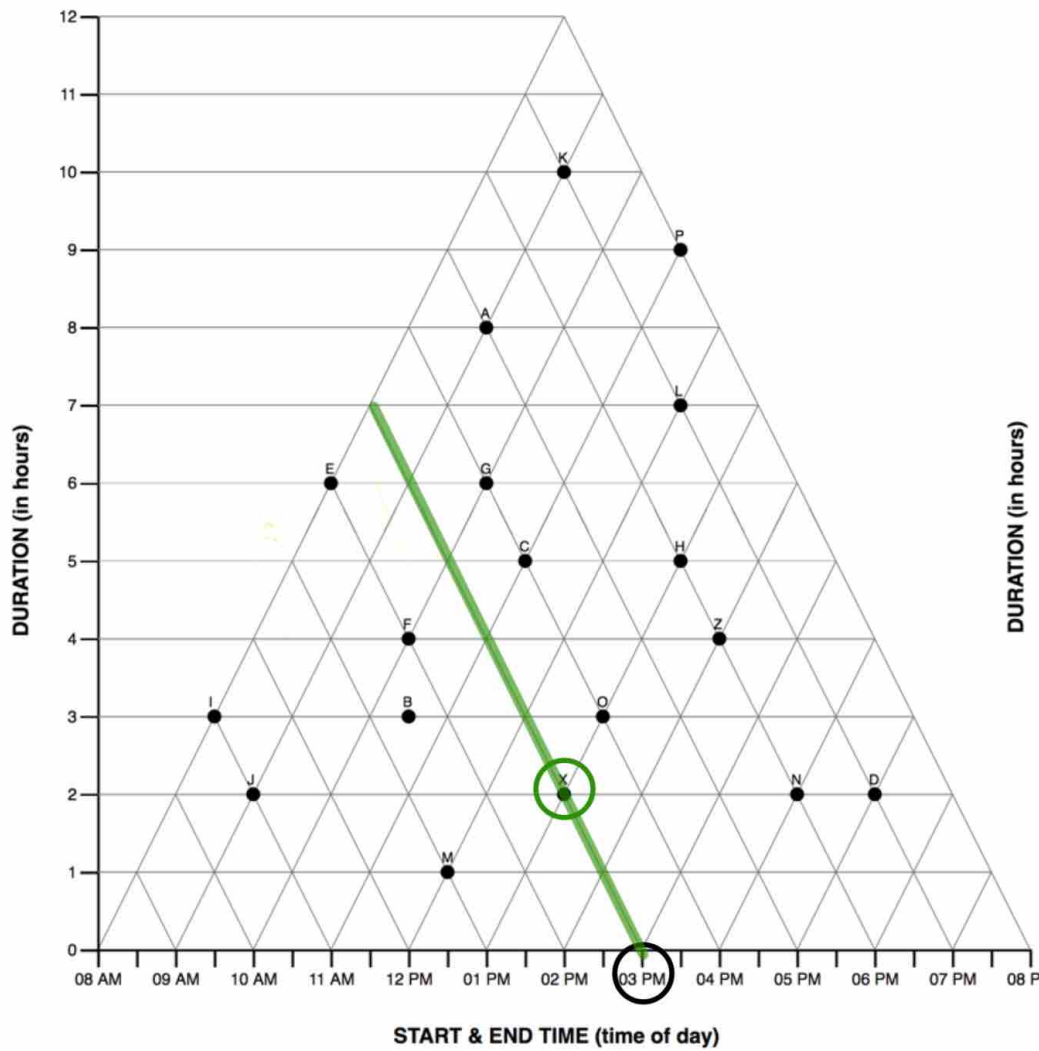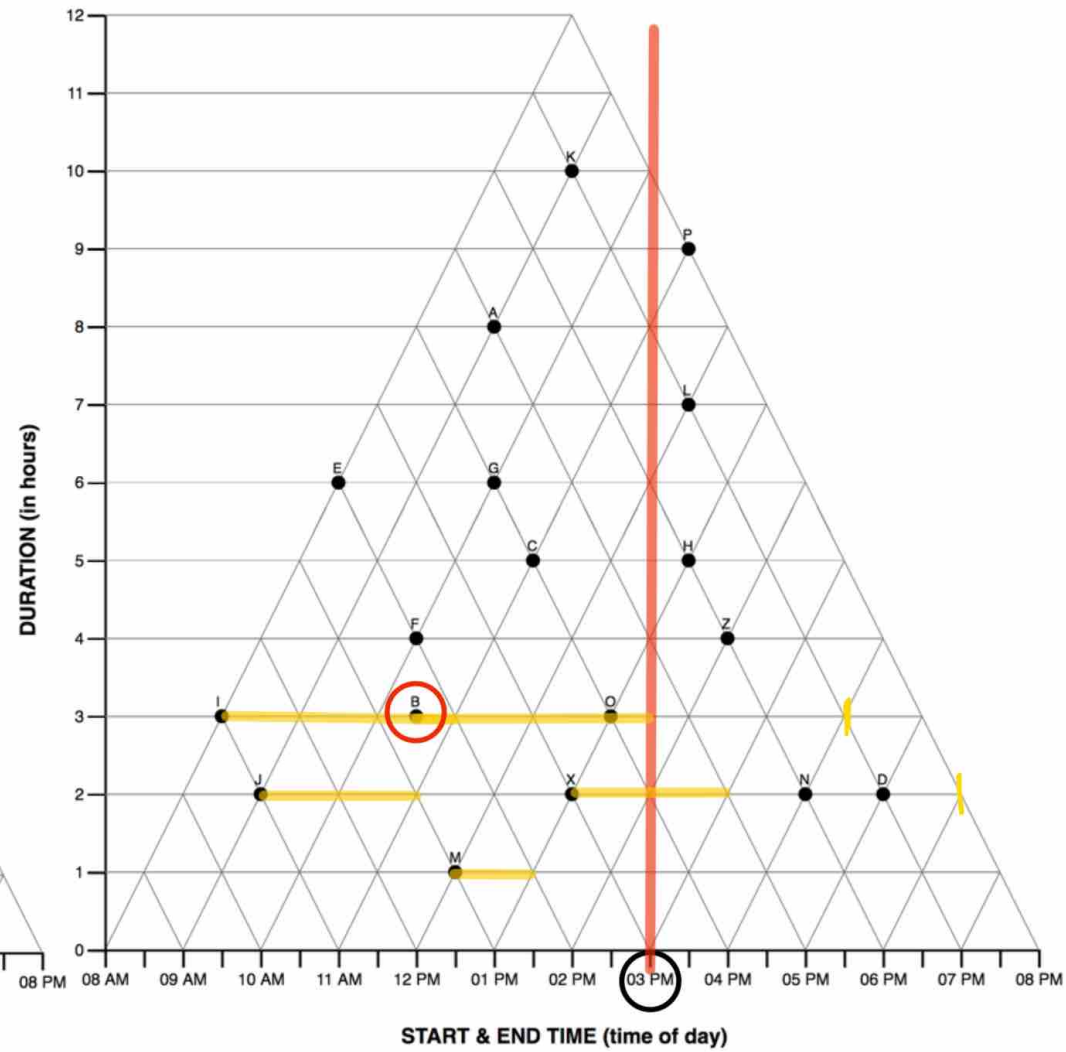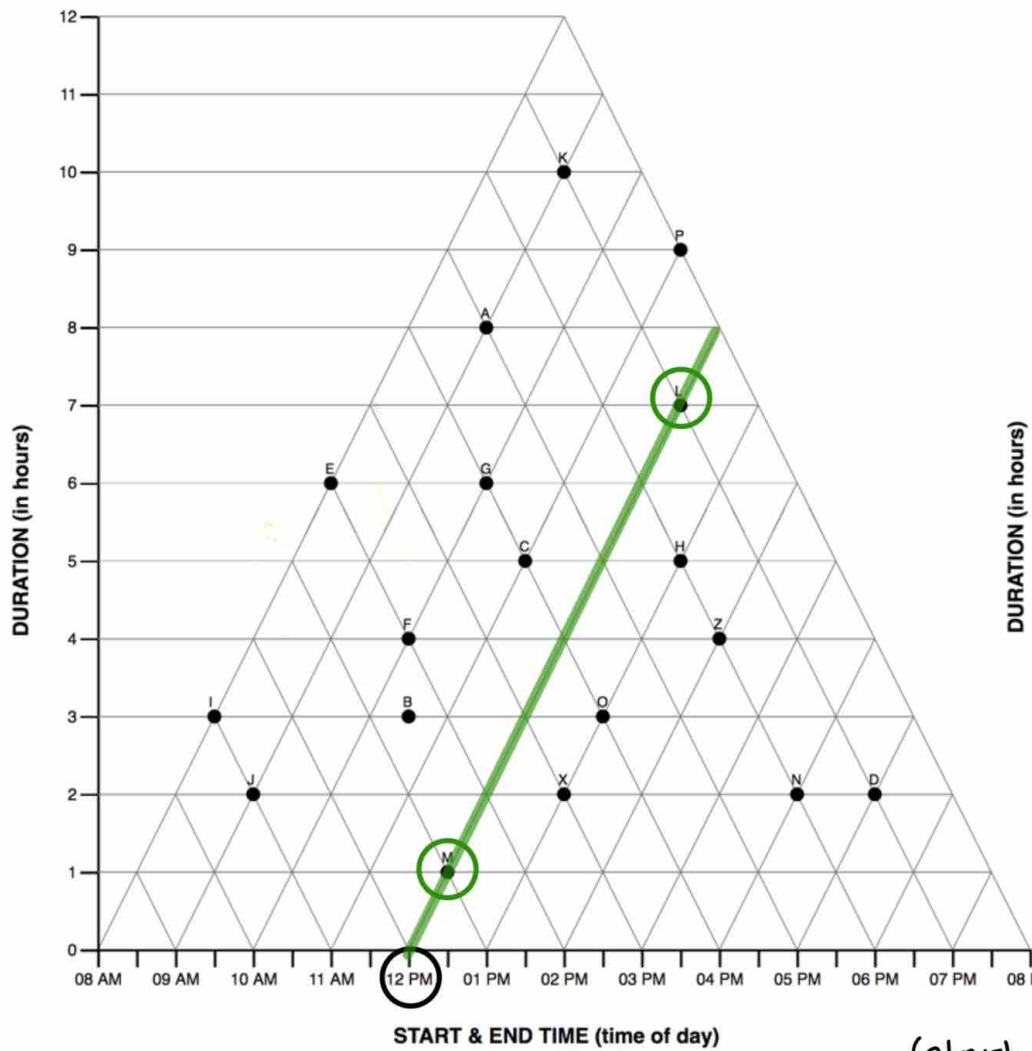
(end-time)

Which shift(s) end at 4 pm?

H u   H

(end-time)

Which shift ends at 3pm?

X

B

Left chart axes: DURATION (in hours) on vertical axis (0–12), START & END TIME (time of day) on horizontal axis (08 AM – 08 PM).

Right chart axes: DURATION (in hours) on vertical axis (0–12), START & END TIME (time of day) on horizontal axis (08 AM – 08 PM).
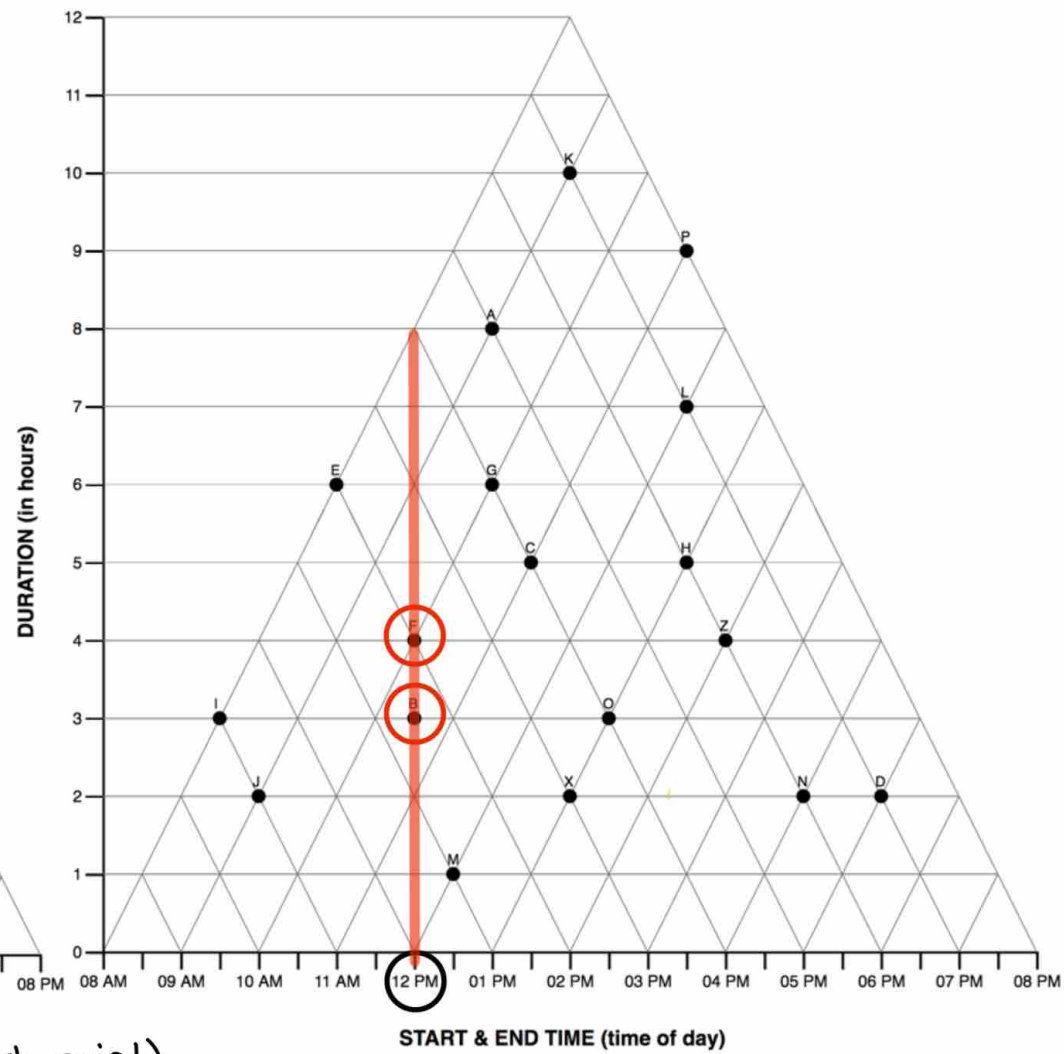
M, L

(start-point)

Which shift starts at 12pm?

F, B

{ Control }

{ Impasse }

DURATION (in hours)

START & END TIME (time of day)

START & END TIME (time of day)
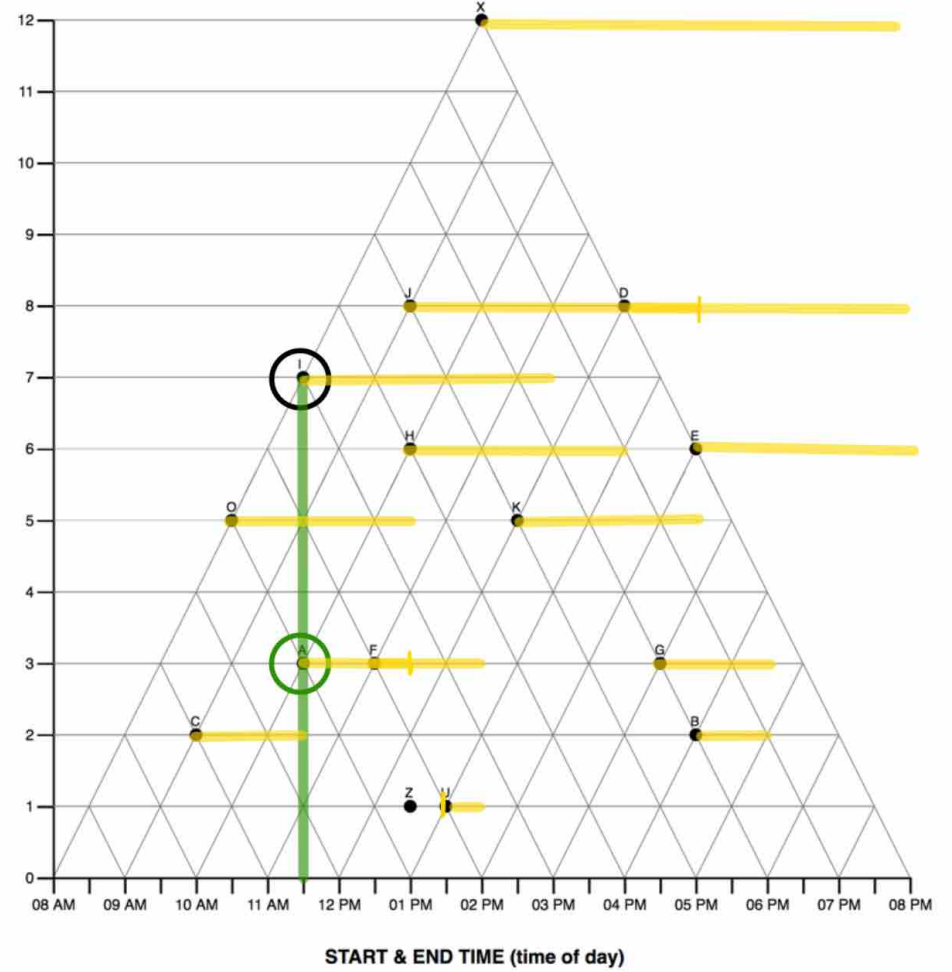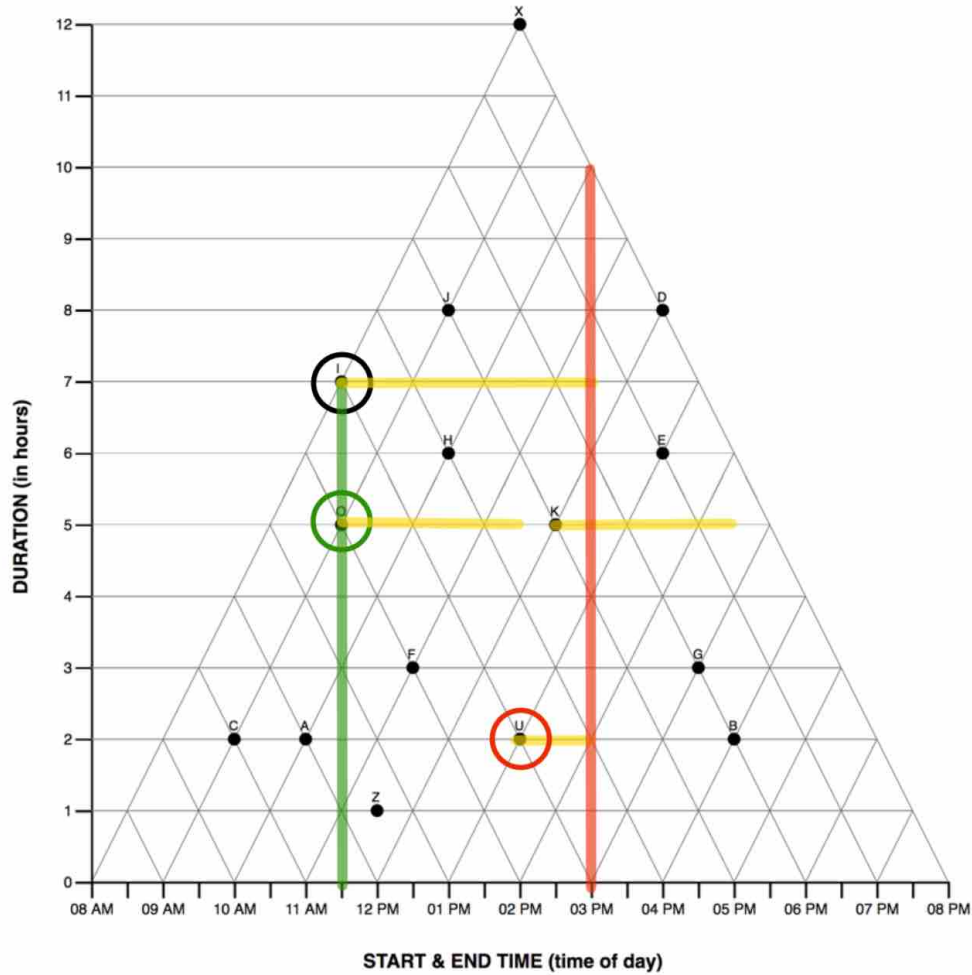
(midpoint)

Which shifts share a midpoint with I?

I,O

I, U

I,A
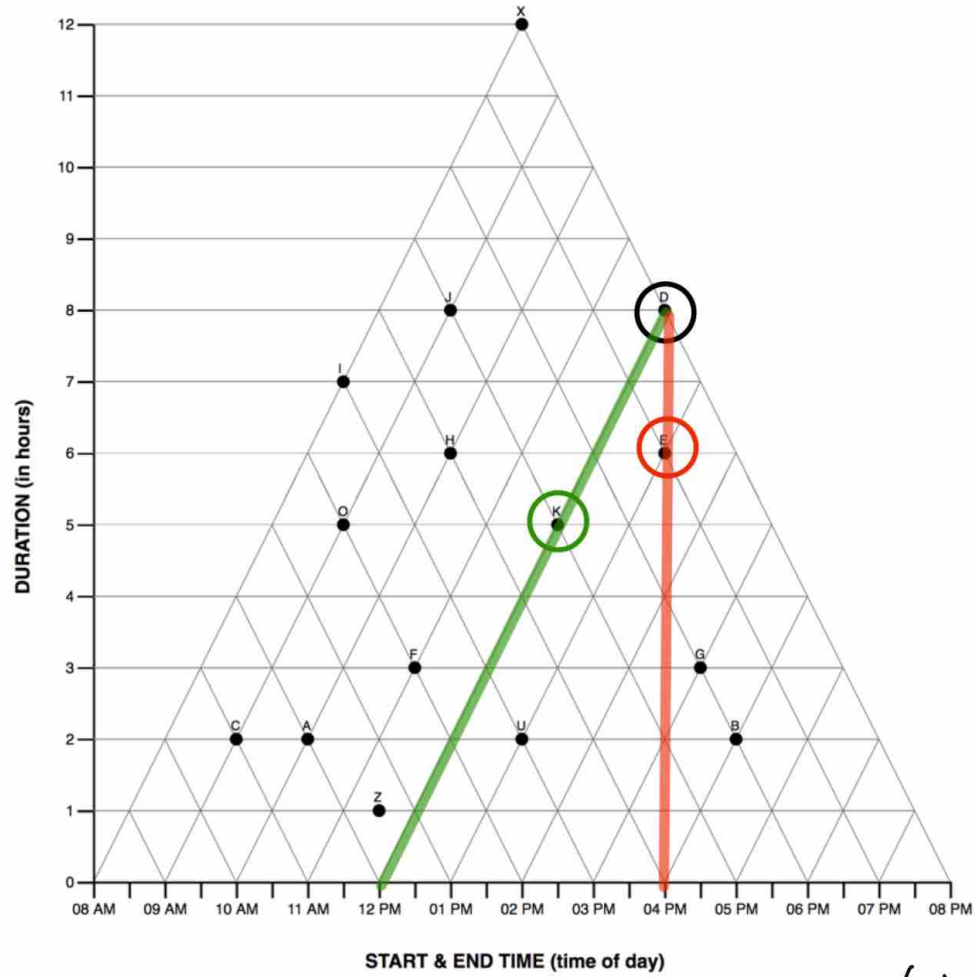
{ Control }
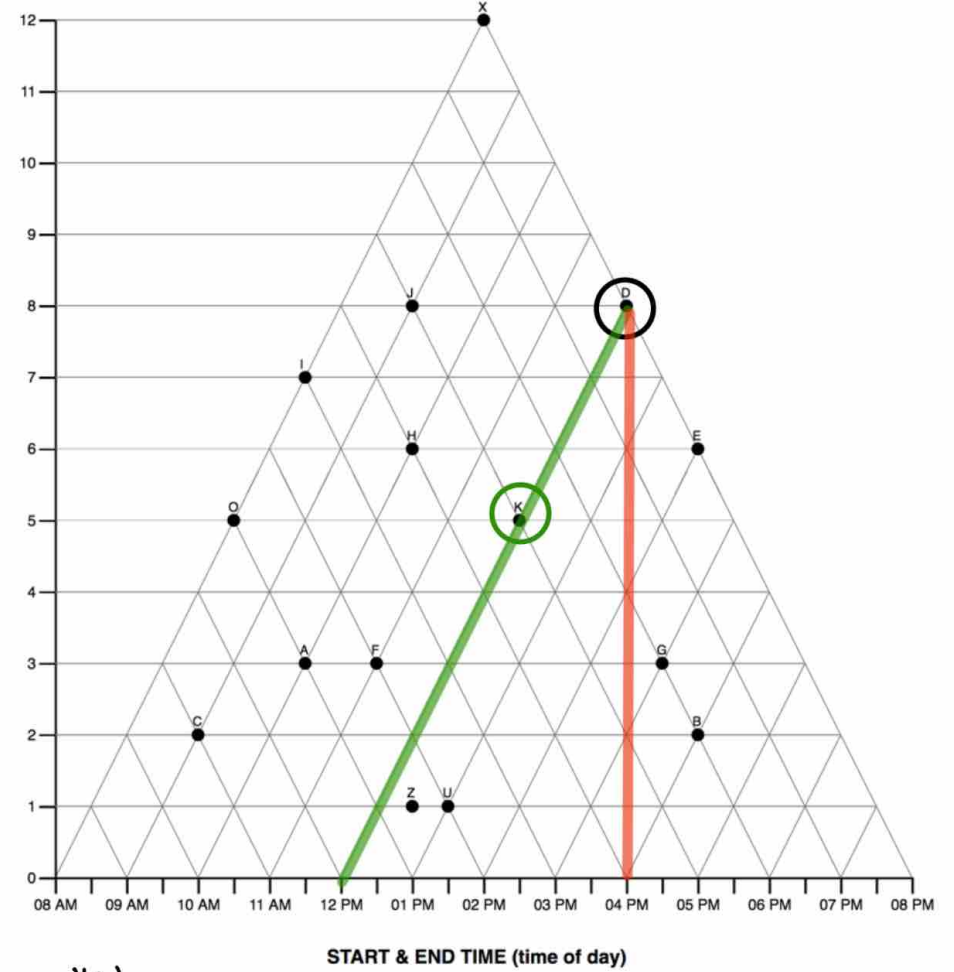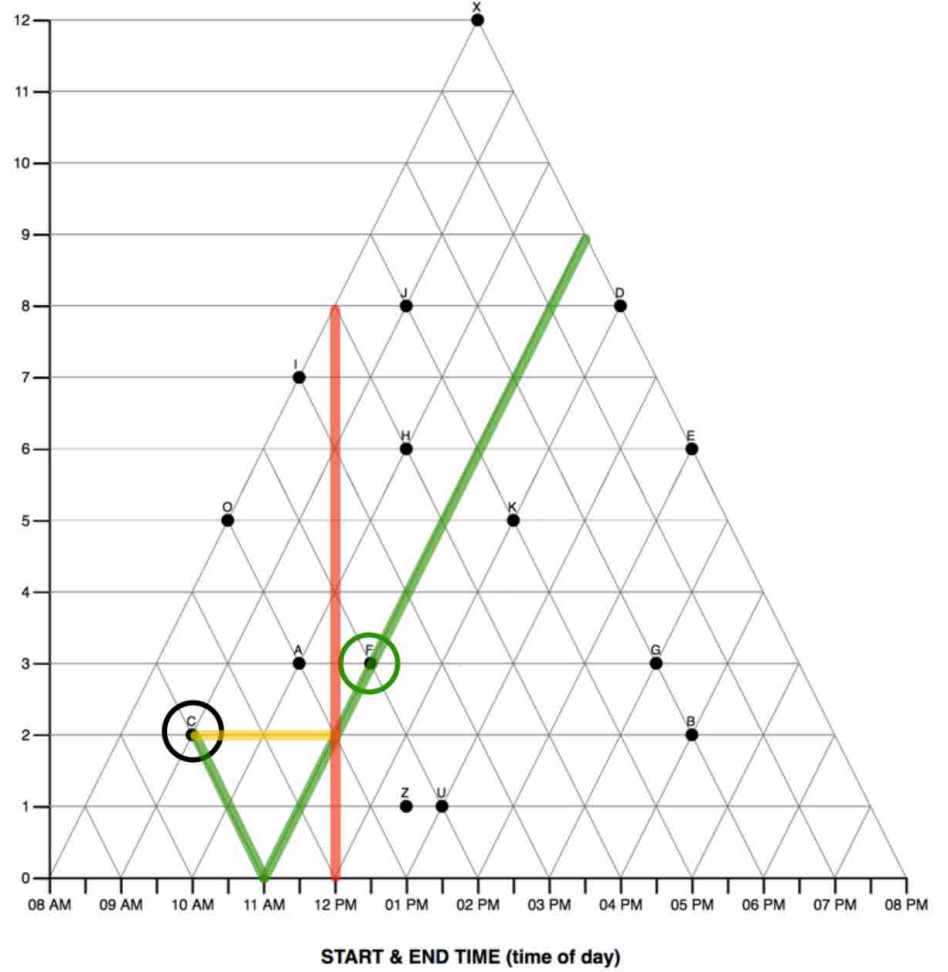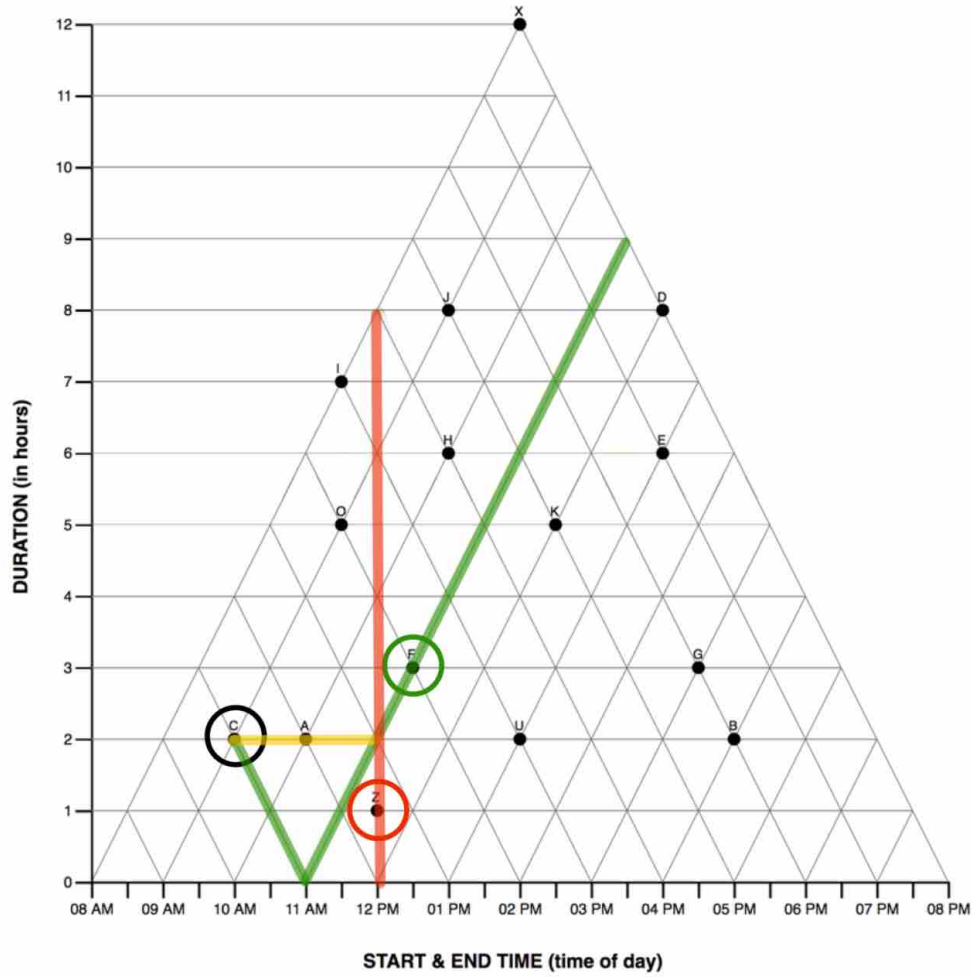
{ Impasse }

(starts-with)

Which shift(s) start with D?

K E

K

{ Control }

{ Impasse }

(meets)
What shift(s) begin when C ends?

F   Z

F