(a) The counter reads $\mathcal{D}_1$, then writes $\mathcal{D}_1{}'$.

(b) Return from $\mathcal{D}_1{}'$ down to $\mathcal{D}_2$

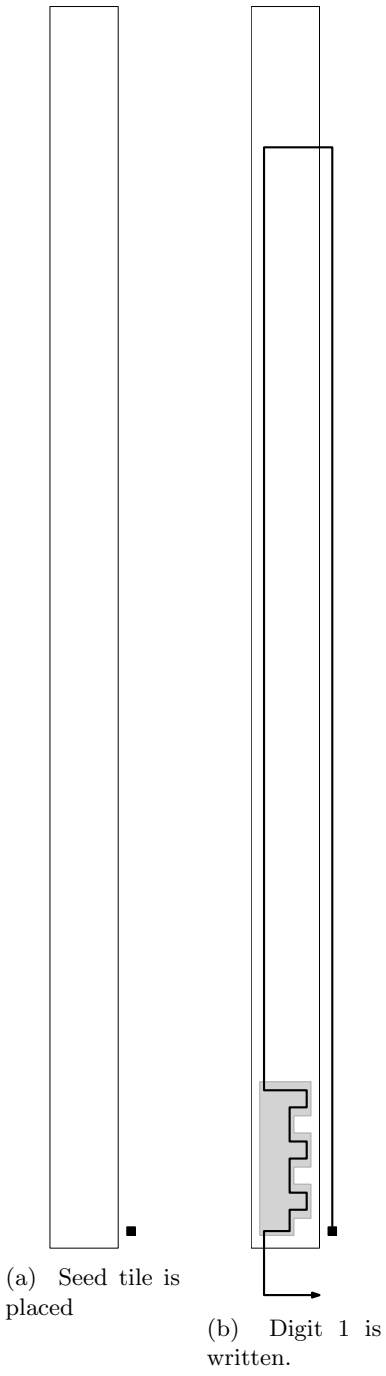
(c) The counter reads $\mathcal{D}_2$, then writes $\mathcal{D}_2{}'$

(d) Return from $\mathcal{D}_2{}'$ down to $\mathcal{D}_3$

(e) The counter reads $\mathcal{D}_3$, then writes $\mathcal{D}_3{}'$

(f) Return from $\mathcal{D}_3{}'$ down to $\mathcal{D}_1{}'$

Figure 1: An overview that showcases how a digit region is read and written in the next counter row.



(a) Seed tile is placed

(b) Digit 1 is written.

Figure 2: Middle-level overview showcasing how a MSR in case 1 is assembled.

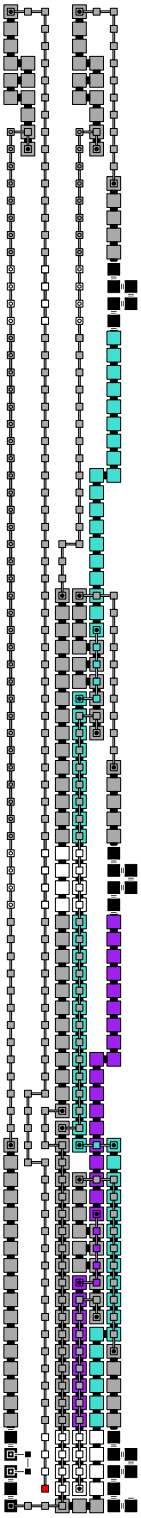


Figure 3: Low-level overview of the MSR in case 1, along with a standard 3 digit region to its east.

(a) Seed tile is placed (b) Digit 1 is written. (c) Digit 2 is written.

Figure 4: Middle-level overview showcasing how a MSR in case 2 is assembled.

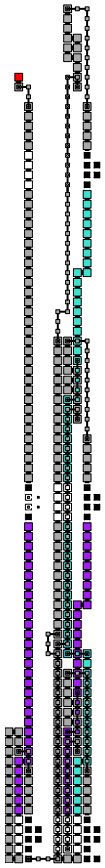
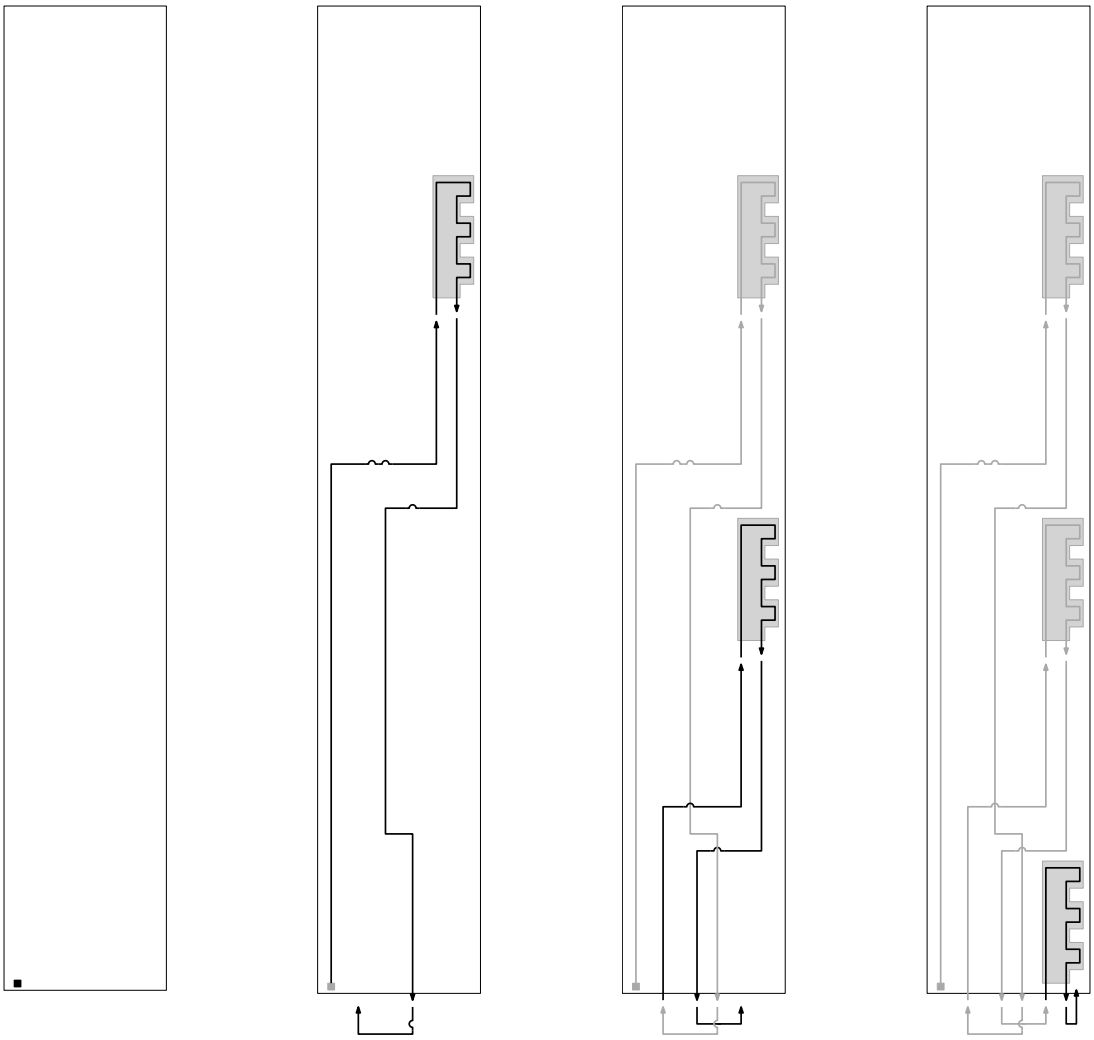


Figure 5: Low-level overview of the MSR in case 2, along with a standard 3 digit region to its east.



(a) Seed tile is placed. (b) Digit 3 is written (c) Digit 2 is written (d) Digit 1 is written

Figure 6: Middle-level overview of how a digit region in the seed is assembled. In the seed, the path is reversed, the digits are written in order of most signifcant to least significant.

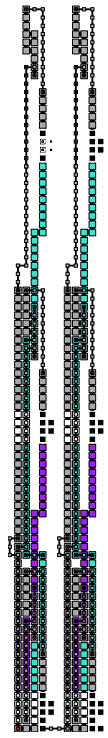


Figure 7: Low-level overview of the MSR in case 3, along with a standard 3 digit region to its east.