```
Minimal@k MD := Minimal@k =
\left(\operatorname{Array}\left[\operatorname{Shift}\left[k, \sharp 1, \left(-1\right)^{\sharp 2}\right] \&, \left\{\operatorname{2 Length@k}, 2\right\}\right] // \operatorname{Join@@} \# \& // \operatorname{KnotSort}\right) [1];
```