

```
In[2]:= SetDirectory[NotebookDirectory[]];
```

```
In[3]:= (in = ReadList["input.txt", String]) ~Take~10 // TableForm
```

```
Out[3]//TableForm=
```

```
position=<-42528, 42920> velocity=< 4, -4>
position=<-31857, -53217> velocity=< 3, 5>
position=< 32290, -21174> velocity=<-3, 2>
position=<-21141, -21171> velocity=< 2, 2>
position=< 32270, -31847> velocity=<-3, 3>
position=< 32266, -31853> velocity=<-3, 3>
position=<-21171, 10873> velocity=< 2, -1>
position=<-10466, -10485> velocity=< 1, 1>
position=<-31814, 53601> velocity=< 3, -5>
position=<-53161, -21166> velocity=< 5, 2>
```

```
In[7]:= (in2 = StringSplit[in, {"<", ">"}]) ~Take~10
```

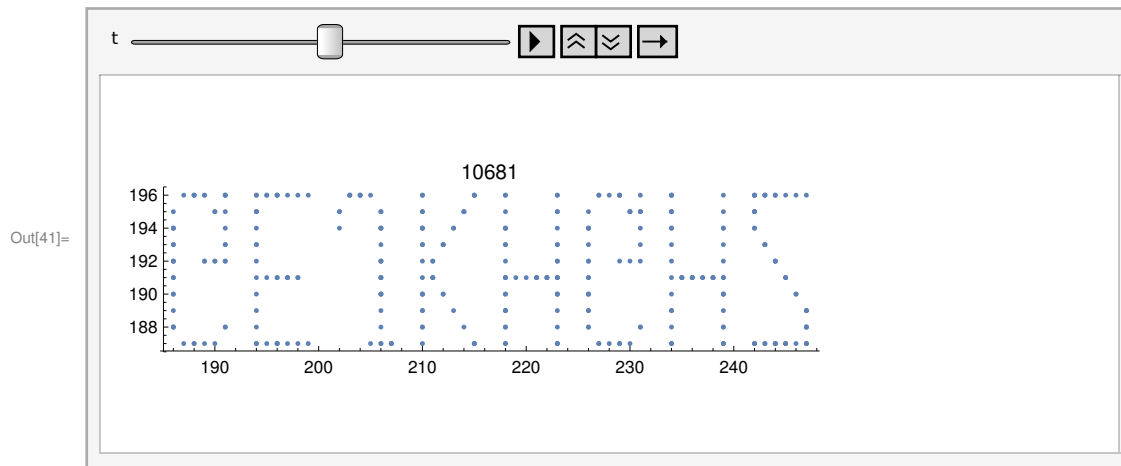
```
Out[7]= {{position=, -42528, 42920, velocity=, 4, -4},
{position=, -31857, -53217, velocity=, 3, 5},
{position=, 32290, -21174, velocity=, -3, 2},
{position=, -21141, -21171, velocity=, 2, 2},
{position=, 32270, -31847, velocity=, -3, 3},
{position=, 32266, -31853, velocity=, -3, 3},
{position=, -21171, 10873, velocity=, 2, -1},
{position=, -10466, -10485, velocity=, 1, 1},
{position=, -31814, 53601, velocity=, 3, -5},
{position=, -53161, -21166, velocity=, 5, 2}}
```

```
In[9]:= (in3 = {#[[2]], #[[3]], #[[5]], #[[6]]} & /@ in2 // ToExpression) ~Take~5
```

```
Out[9]= {{-42528, 42920, 4, -4}, {-31857, -53217, 3, 5},
{32290, -21174, -3, 2}, {-21141, -21171, 2, 2}, {32270, -31847, -3, 3}}
```

```
In[44]:= advance[list_, t_] := Module[{coords},
  coords = {#[[1]] + t * #[[3]], #[[2]] + t * #[[4]]} & /@ list;
  Print[{Min[coords][[All, 1]],
    Max[coords][[All, 1]], Min[coords][[All, 2]], Max[coords][[All, 2]]}];
  ListPlot[coords, PlotLabel -> ToString[t], PlotRange -> All, AspectRatio -> 1 / 4]
]
```

```
In[41]:= Animate[advance[in3, t], {t, 10 660, 10 700, 1}, AnimationRunning -> False]
```



```
In[45]:= advance[in3, 10 681]
```

```
{186, 247, 187, 196}
```

