

Moving points

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Basic OOP of moving points on the lemniscate. Each moving point is an instance defined in the class.

```
DynamicModule[{
  n=10,
  speed=0.01,
  bg=ListLinePlot[Table[{Sin[u],Sin[2u]},{u,0,2Pi,Pi/
100.}],Axes->None]},

  CLASS DEFINITION;
  new[nam_]:=Module[{u=0,v=1},
    setv[nam[x_]]^:=v=x;
    step[nam]^:=(u++;Point[{Sin[u*v],Sin[2u*v]}])
  ];

  CREATE INSTANCES;
  objectList=Table[Unique[],{n}];
  Map[new[#]&,objectList];
  Map[setv[# [speed*RandomReal[{1.,10.}]]]&,objectList];

  SHOW GRAPHICS;

  movingPoints:=Graphics[{PointSize[Large],Map[step[#]&,obj
ectList]}];
  Animate[t;
    Show[{bg,movingPoints},PlotRange->1.2],{t,
0,100,1},AnimationRunning->False]
]
```