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> with(DEtools):
with(plots):
> DE01:=diff(y(t),t)=t-y(t)^2;

$$DE01 := \frac{d}{dt} y(t) = t - y(t)^2$$


```

(1)

First, we plot the direction field and some isoclines:

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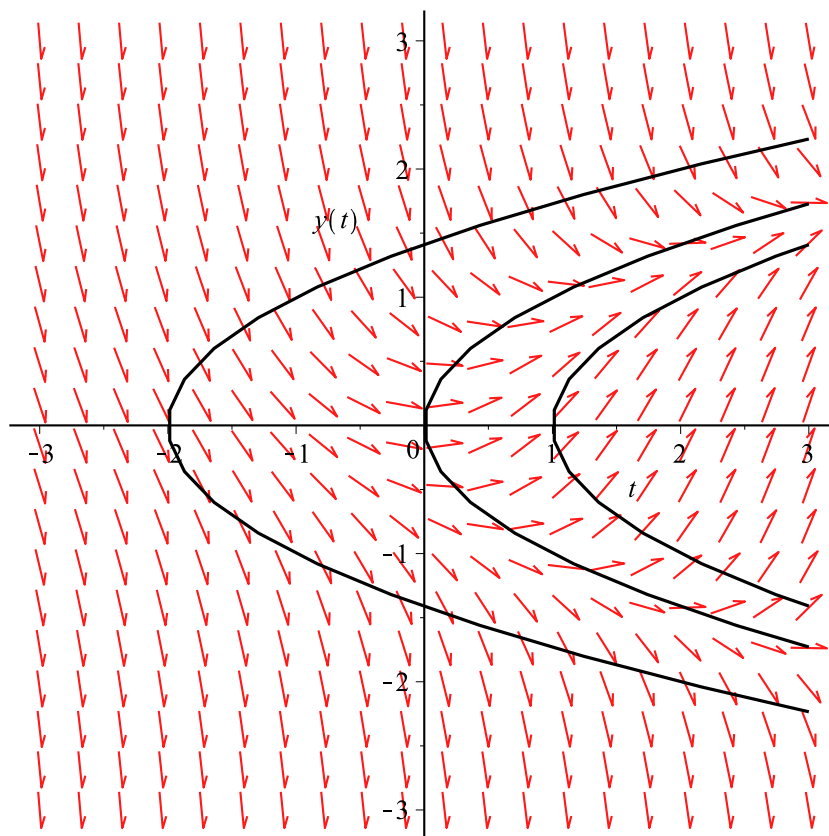
> A1:=DEplot(DE01,y(t),t=-3..3,y=-3..3): #The direction field
> A2:=implicitplot(t-y^2=0,t=-3..3,y=-3..3,color=black): #Isocline
for y'=0
A3:=implicitplot(t-y^2=1,t=-3..3,y=-3..3,color=black): #Isocline
for y'=1
A4:=implicitplot(t-y^2=-2,t=-3..3,y=-3..3,color=black): #Isocline
for y'=-2

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> display(A1,A2,A3,A4); #Display the plots (overlying them all)

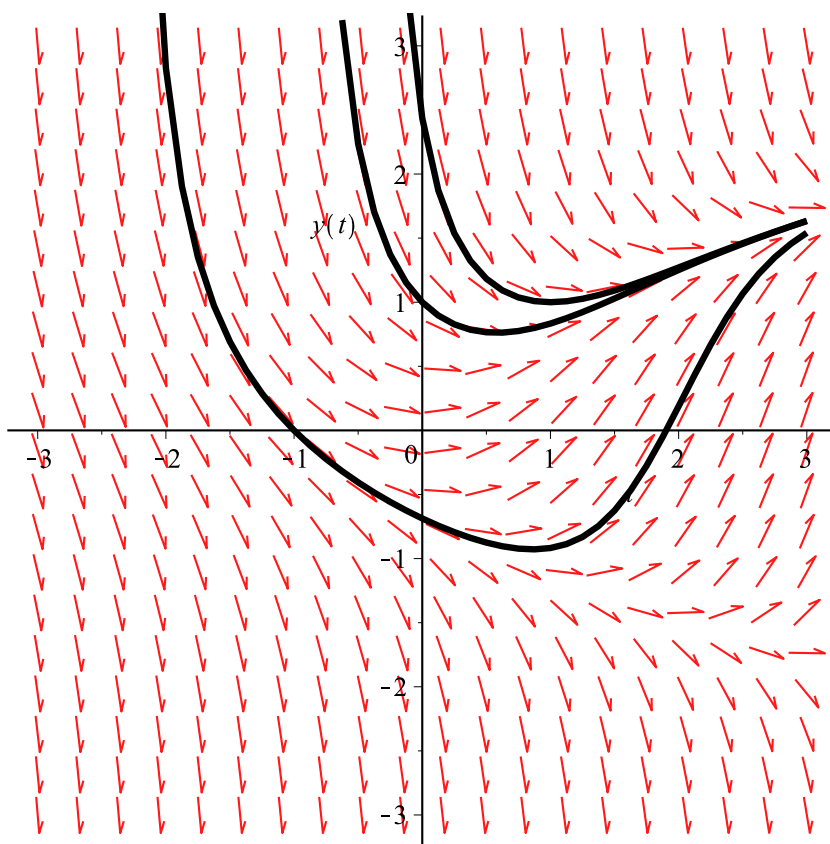
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> DEplot(DE01,y(t),t=-3..3,y=-3..3,[[y(0)=1],[y(-1)=0],[y(1)=1]],
linecolor=black);

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> dsolve(DE01,y(t));
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$$y(t) = \frac{C1 \text{AiryAi}(1, t) + \text{AiryBi}(1, t)}{-C1 \text{AiryAi}(t) + \text{AiryBi}(t)}$$

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> ?AiryAi
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(2)