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8.4.3 Creating an IVP object

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MO2.2

MO2.4

In this video, we now discuss how to create an IVP object using the IVP class. Specifically, we will create an IVP object for the coffee cooling problem discussed in Sections [8.2.3](#) and [8.3.3](#).

The code used for the coffee cooling IVP implementation is available for download [here](#).

3.3.3 Cooling of coffee

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MO1.4

For the coffee cooling example in Section 3.2.3, dividing Equation (3.16) by $m_c c_c$ gives

$$\frac{dT_c}{dt} = -\frac{hA}{m_c c_c} (T_{\text{out}} - T_c)$$

which in terms of the general IVP form gives a scalar ($M = 1$) system of equation with

$$u = T_c, \quad f = -\frac{hA}{m_c c_c} (T_{\text{out}} - u)$$

Start of transcript.

Skip to the end.

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PROFESSOR: We're going to now implement a IVP for the coffee cooling problem. And remember that the coffee cooling problem when we write it in our standard initial

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