2b

$$TUID = \frac{9+1+5+1+8+7+2+8+9}{9} \approx 5.555\overline{5} = \alpha$$

- predict next value using current slope
- correct the predicted value using the average of the current slope and current slope at predicted value

$y[-1]$ – python last value

$dydt$ – current slope

predictor

$$y^* = y_{current} + h \times dydt\left(t_{current}, y_{current}, f(t_{current})\right)$$

h → step size

corrector

$$y_{next} = y_{current} + \frac{h}{2} \times \left[dydt\left(t_{current}, y_{current}, f(t_{current})\right) + dydt\left(t_{current} + h, y^*, f(t_{current} + h)\right)\right]$$

$t_{current} + h$ → (t), y^* → (y), $f(t_{current} + h)$ → $f(t)$

Append values and loop