

MATARIA PENCE

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Assignment-1 AE441

Q.1. -----

CODE

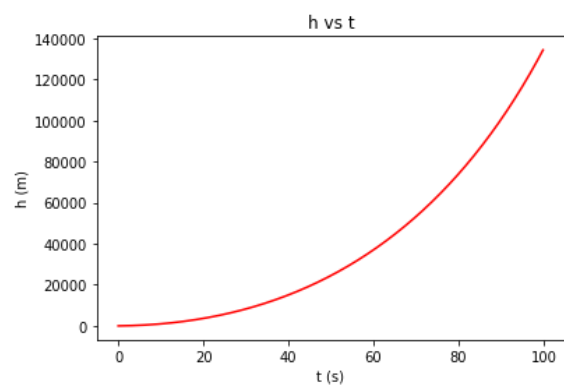
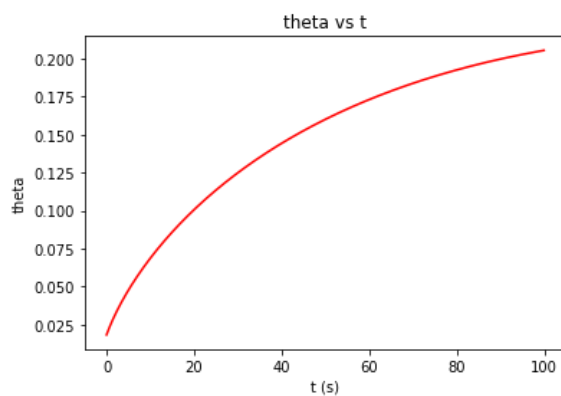
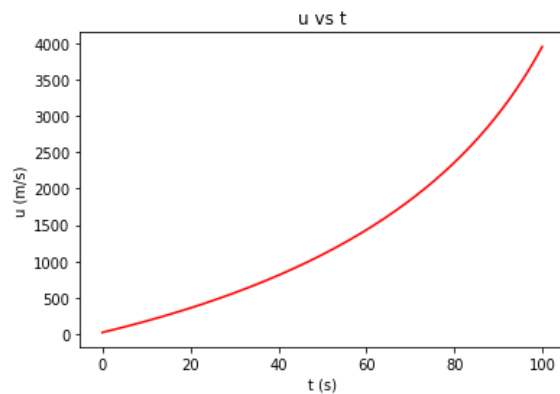
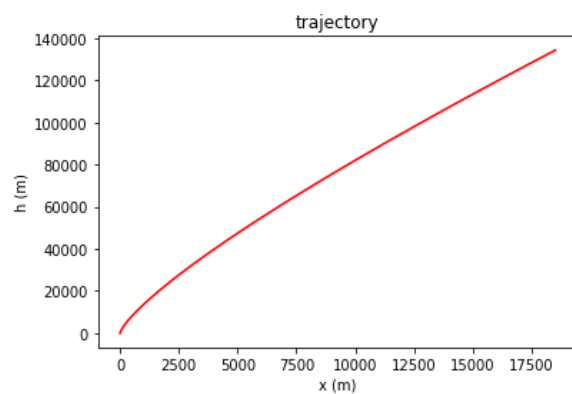
<https://colab.research.google.com/drive/1UGZJgr5V4ZsJZC7XJBMX9sWSzcATWqKS?usp=sharing>

(a.) Constant G and $D=0$

$$h_b = 134279.48 \text{ m}$$

$$u_b = 3950.71 \text{ m/s}$$

$$\theta_b = 0.2053 \text{ radian}$$

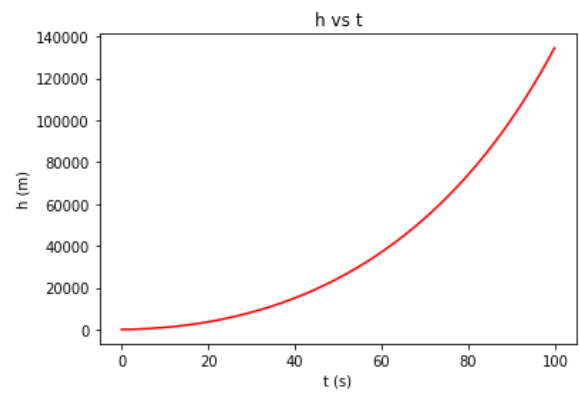
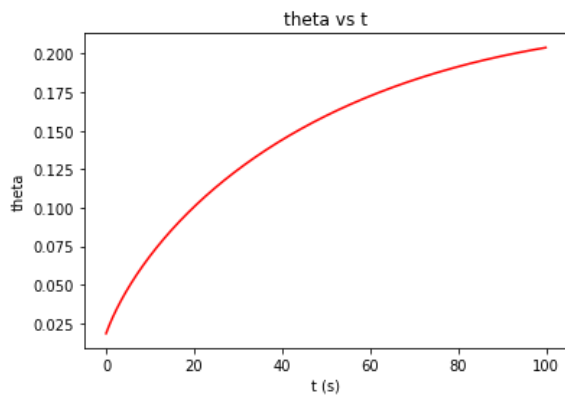
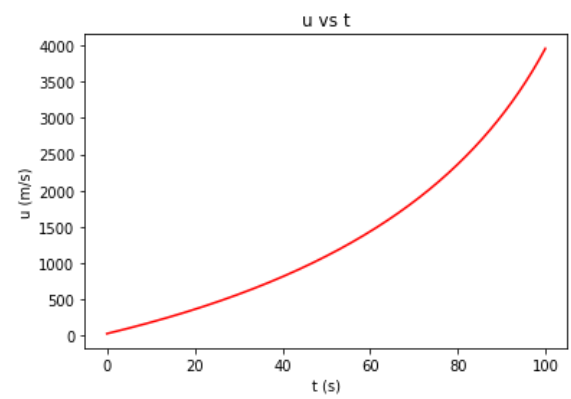
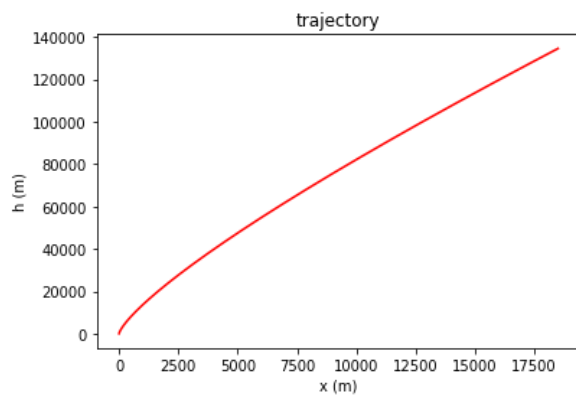


(b.) Variable G and D=0

$$h_b = 134540.79 \text{ m}$$

$$u_b = 3961.83 \text{ m/s}$$

$$\theta_b = 0.2039 \text{ radian}$$

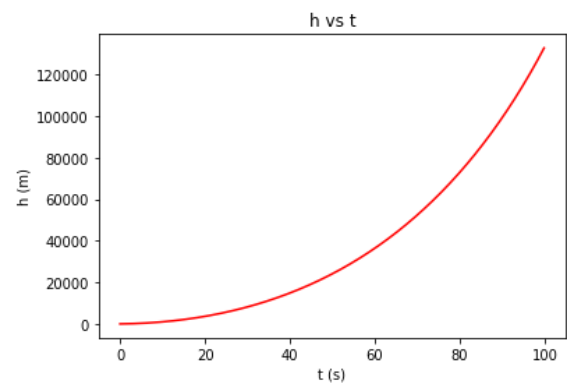
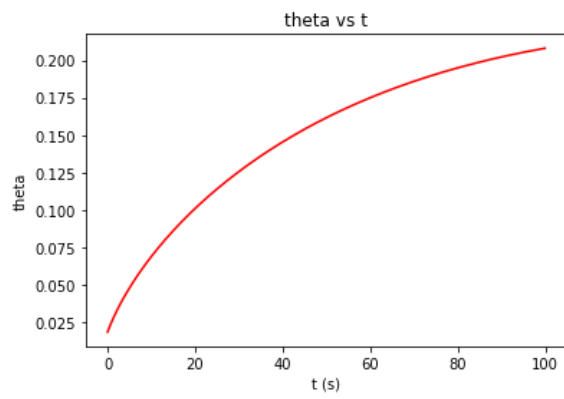
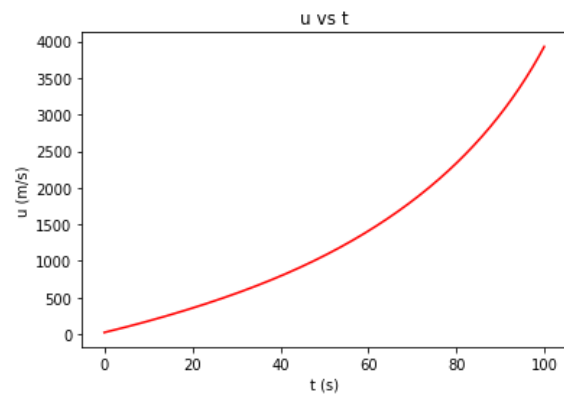
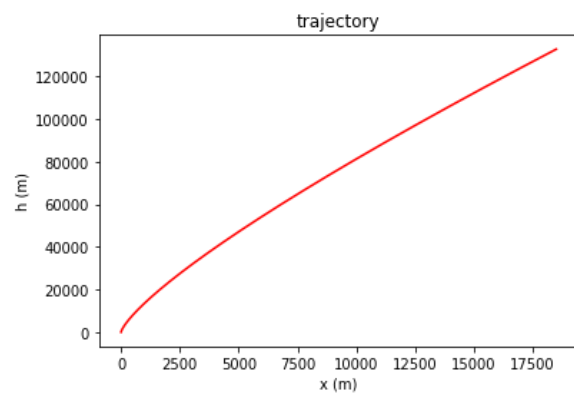


(c.) Constant G and variable D

$$h_b = 132805.51 \text{ m}$$

$$u_b = 3928.64 \text{ m/s}$$

$$\theta_b = 0.2080 \text{ radian}$$



(d.) Variable G and D

$$h_b = 133062.80 \text{ m}$$

$$u_b = 3939.60 \text{ m/s}$$

$$\theta_b = 0.2065 \text{ radian}$$

