

# PAKISTAN INSTITUTE OF ENGINEERING AND APPLIED SCIENCES

## DEPARTMENT OF PHYSICS AND APPLIED MATHEMATICS

### ASSIGNMENT # 2, PAM-533, DUE DATE: 26/07/2021

Please submit your portable **.dat**, **.py** and **.sh** files at aibutt@ualberta.ca no later than 13:30

**Problem 1:** A projectile thrown vertically at some initial velocity  $v_i$  has position  $y(t) = y_i + v_i t - \frac{1}{2}gt^2$  where  $g = 9.8 \text{ m/s}^2$ . Write a Python program that creates two numpy arrays, one containing time data (100 data points over 10 seconds) and the other containing the corresponding vertical position data for this projectile. The program should ask the user for the initial height  $y_i$  and initial velocity  $v_i$ . Print a nicely-formatted table of the list values after it has calculated them.

HAPPY CODING ☺