

Ajase Boluwatife Ajomide  
Civil Engineering  
17/EN1003/008

Assignment 3

If  $\phi = x^2yZ^3 + xy^2Z^2$ , write a matlab mfile program to determine the gradient at point 'P(1,3,2)

Command window

Close all

clc

Syms x,y

Syms z

$$A = (x^2 * y * z^3) + (x * y^2 * z^2)$$

$$u = \text{diff}(A, x)$$

$$v = \text{diff}(A, y)$$

$$w = \text{diff}(A, z)$$

$$x = 1$$

$$y = 3$$

$$z = 2$$

$$u_n = \text{subs}(u)$$

$$v_n = \text{subs}(v)$$

$$w_n = \text{subs}(w)$$