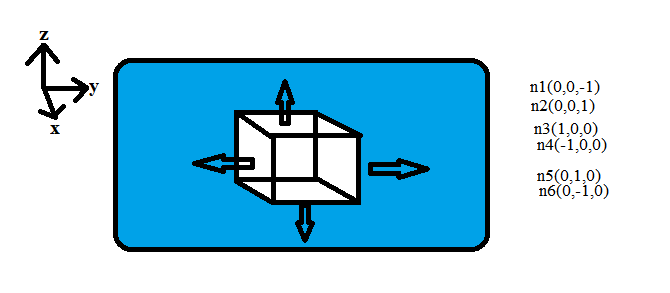
**Submerged body**

****

**Output**

Output : 1 [Heave added mass calculation]

Added Mass Calculation of a submerged rectangular body

Enter Value of length : 5

Enter value of breadth : 4

Enter value of height : 6

Density of water used : 1.025tonnes/m^3

....NOTE....

X is along front and back face

Y is along left and right face

Z is along bottom and top face

values of modes, heave=2, sway=1.surge=0

Enter the mode : 2

Phi of bottom Face(face\_1) : [-1.26707112 -1.48201833 -1.48201833 -1.26707112 -1.51447765 -1.78486883

-1.78486883 -1.51447765 -1.58061116 -1.86522179 -1.86522179 -1.58061116

-1.51447765 -1.78486883 -1.78486883 -1.51447765 -1.26707112 -1.48201833

-1.48201833 -1.26707112]

Phi of Top Face(face\_2) : [1.26707112 1.48201833 1.48201833 1.26707112 1.51447765 1.78486883

1.78486883 1.51447765 1.58061116 1.86522179 1.86522179 1.58061116

1.51447765 1.78486883 1.78486883 1.51447765 1.26707112 1.48201833

1.48201833 1.26707112]

Phi of Front Face(face\_3) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Back Face(face\_4) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Right Face(face\_5): [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0.]

Phi of Left Face(face\_6) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0.]

Added Mass........

Heave Added mass : 63.72508966381723

Surge Added mass : 0

Sway Added mass : 0

Output : 2 [Sway added mass calculation]

Added Mass Calculation of a submerged rectangular body

Enter Value of length : 10

Enter value of breadth : 7

Enter value of height : 5

Density of water used : 1.025tonnes/m^3

....NOTE....

X is along front and back face

Y is along left and right face

Z is along bottom and top face

values of modes, heave=2, sway=1.surge=0

Enter the mode : 1

Phi of bottom Face(face\_1) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Top Face(face\_2) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Front Face(face\_3) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Back Face(face\_4) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Right Face(face\_5): [1.99802035 2.27247534 2.34818786 2.27247534 1.99802035 2.34438375

2.691366 2.78744044 2.691366 2.34438375 2.53579153 2.91641729

3.02394787 2.91641729 2.53579153 2.64492014 3.04127793 3.15447377

3.04127793 2.64492014 2.69521513 3.09794507 3.213459 3.09794507

2.69521513 2.69521513 3.09794507 3.213459 3.09794507 2.69521513

2.64492014 3.04127793 3.15447377 3.04127793 2.64492014 2.53579153

2.91641729 3.02394787 2.91641729 2.53579153 2.34438375 2.691366

2.78744044 2.691366 2.34438375 1.99802035 2.27247534 2.34818786

2.27247534 1.99802035]

Phi of Left Face(face\_6) : [-1.99802035 -2.27247534 -2.34818786 -2.27247534 -1.99802035 -2.34438375

-2.691366 -2.78744044 -2.691366 -2.34438375 -2.53579153 -2.91641729

-3.02394787 -2.91641729 -2.53579153 -2.64492014 -3.04127793 -3.15447377

-3.04127793 -2.64492014 -2.69521513 -3.09794507 -3.213459 -3.09794507

-2.69521513 -2.69521513 -3.09794507 -3.213459 -3.09794507 -2.69521513

-2.64492014 -3.04127793 -3.15447377 -3.04127793 -2.64492014 -2.53579153

-2.91641729 -3.02394787 -2.91641729 -2.53579153 -2.34438375 -2.691366

-2.78744044 -2.691366 -2.34438375 -1.99802035 -2.27247534 -2.34818786

-2.27247534 -1.99802035]

Added Mass........

Sway Added mass : 274.71284945186056

Heave Added mass : 0

Surge Added mass : 0

Output : 3 [Surge added mass calculation]

Added Mass Calculation of a submerged rectangular body

Enter Value of length : 8

Enter value of breadth : 8

Enter value of height : 8

Density of water used : 1.025tonnes/m^3

....NOTE....

X is along front and back face

Y is along left and right face

Z is along bottom and top face

values of modes, heave=2, sway=1.surge=0

Enter the mode : 0

Phi of bottom Face(face\_1) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Top Face(face\_2) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Front Face(face\_3) : [2.36299746 2.71511943 2.89841583 2.98107006 2.98107006 2.89841583

2.71511943 2.36299746 2.71511943 3.15084733 3.37455871 3.47393365

3.47393365 3.37455871 3.15084733 2.71511943 2.89841583 3.37455871

3.62296877 3.73358398 3.73358398 3.62296877 3.37455871 2.89841583

2.98107006 3.47393365 3.73358398 3.84963092 3.84963092 3.73358398

3.47393365 2.98107006 2.98107006 3.47393365 3.73358398 3.84963092

3.84963092 3.73358398 3.47393365 2.98107006 2.89841583 3.37455871

3.62296877 3.73358398 3.73358398 3.62296877 3.37455871 2.89841583

2.71511943 3.15084733 3.37455871 3.47393365 3.47393365 3.37455871

3.15084733 2.71511943 2.36299746 2.71511943 2.89841583 2.98107006

2.98107006 2.89841583 2.71511943 2.36299746]

Phi of Back Face(face\_4) : [-2.36299746 -2.71511943 -2.89841583 -2.98107006 -2.98107006 -2.89841583

-2.71511943 -2.36299746 -2.71511943 -3.15084733 -3.37455871 -3.47393365

-3.47393365 -3.37455871 -3.15084733 -2.71511943 -2.89841583 -3.37455871

-3.62296877 -3.73358398 -3.73358398 -3.62296877 -3.37455871 -2.89841583

-2.98107006 -3.47393365 -3.73358398 -3.84963092 -3.84963092 -3.73358398

-3.47393365 -2.98107006 -2.98107006 -3.47393365 -3.73358398 -3.84963092

-3.84963092 -3.73358398 -3.47393365 -2.98107006 -2.89841583 -3.37455871

-3.62296877 -3.73358398 -3.73358398 -3.62296877 -3.37455871 -2.89841583

-2.71511943 -3.15084733 -3.37455871 -3.47393365 -3.47393365 -3.37455871

-3.15084733 -2.71511943 -2.36299746 -2.71511943 -2.89841583 -2.98107006

-2.98107006 -2.89841583 -2.71511943 -2.36299746]

Phi of Right Face(face\_5): [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Phi of Left Face(face\_6) : [0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Added Mass........

Surge Added mass : 420.9864239929449

Heave Added mass : 0

Sway Added mass : 0