Matrix B: **double**[][] array2 = {{18, 0, 0, 1, 0, 0, 0, 0, -8100, 0, 0 },

{0, 0, 0, 0, 18, 0, 0, 1, -5652, 0, 0 },

{18, 0, 14, 1, 0, 0, 0, 0, -8154, 0, -6342},

{0, 0, 0, 0, 18, 0, 14, 1, -15372, 0, -11830 },

{0, 18, 14, 1, 0, 0, 0, 0, 0, -25272, -19656 },

{0, 0, 0, 0, 0, 18, 14, 1, 0, -15372, -11956 },

{0, 18, 0, 1, 0, 0, 0, 0, 0, -25326, 0 },

{0, 0, 0, 0, 0, 18, 0, 1, 0, -5760, 0},

{14, 0, 6, 1, 0, 0, 0, 0, -8022, 0, -3438},

{0, 0, 0, 0, 14, 0, 6, 1, -7588, 0, -3252 },

{0, 6, 8, 1, 0, 0, 0, 0, 0, -10818, -14424 },

{0, 0, 0, 0, 0, 6, 8, 1, 0, -3612, -4816 }};

B transpose:

[[844.0, 0.0, 336.0, 50.0, 0.0, 0.0, 0.0, 0.0, -404880.0, 0.0, -162288.0,-24276.0],

[0.0, 684.0, 300.0, 42.0, 0.0, 0.0, 0.0, 0.0, 0.0, -975672.0, -440352.0, -61416.0],

[336.0, 300.0, 492.0, 42.0, 0.0, 0.0, 0.0, 0.0, -162288.0, -440352.0, -499992.0, -43860.0],

[50.0, 42.0, 42.0, 6.0, 0.0, 0.0, 0.0, 0.0, -24276.0, -61416.0, -43860.0, -6090.0],

[0.0, 0.0, 0.0, 0.0, 844.0, 0.0, 336.0, 50.0, -484664.0, 0.0, -258468.0, -28450.0],

[0.0, 0.0, 0.0, 0.0, 0.0, 684.0, 300.0, 42.0, 0.0, -402048.0, -244104.0, -24744.0],

[0.0, 0.0, 0.0, 0.0, 336.0, 300.0, 492.0, 42.0, -260736.0, -244104.0, -391044.0, -31854.0],

[0.0, 0.0, 0.0, 0.0, 50.0, 42.0, 42.0, 6.0, -28612.0, -24744.0, -31854.0, -3477.0],

[-404880.0, 0.0, -162288.0, -24276.0, -484664.0, 0.0, -260736.0, -28612.0, 5.22271432E8, 0.0, 2.8581924E8, 3.0812132E7],

[0.0, -975672.0, -440352.0, -61416.0, 0.0, -402048.0, -244104.0, -24744.0, 0.0, 1.679631912E9, 8.53968288E8, 1.07765736E8],

[-162288.0, -440352.0, -499992.0, -43860.0, -258468.0, -244104.0, -391044.0, -31854.0, 2.8581924E8, 8.53968288E8, 9.63115116E8, 8.3314986E7],

[-24276.0, -61416.0, -43860.0, -6090.0, -28450.0, -24744.0, -31854.0, -3477.0, 3.0812132E7, 1.07765736E8, 8.3314986E7, 1.0238217E7]]

Eigen Values =

0.000432 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.031306 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 5.552821 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 31.580596 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 54.911258 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 176.918538 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 752.393582 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 1091.253136 0.000000 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 1135316.950979 0.000000 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 207943260.999406 0.000000 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 695627220.683822 0.000000

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 2270552817.724127

Eigen Vectors =

0.009127 0.064004 -0.257198 -0.264533 0.596683 -0.011141 -0.404218 -0.583216 -0.001939 0.000673 -0.000565 -0.000057

-0.082468 0.161853 -0.868148 0.059305 -0.295879 0.005576 0.316060 -0.149447 -0.000463 0.000411 0.000277 -0.000463

-0.001122 0.005084 0.123920 0.778855 0.019757 -0.466647 0.029537 -0.398723 -0.000132 -0.000318 -0.000262 -0.000290

-0.929983 -0.363209 0.022922 -0.026575 0.005387 -0.002545 -0.004371 -0.043877 -0.000645 0.000045 -0.000021 -0.000034

-0.049397 0.078758 -0.134254 -0.109826 0.558940 -0.563630 0.348394 0.458039 -0.000020 0.000595 -0.000720 -0.000084

-0.049595 0.083054 -0.210241 -0.019595 -0.303213 -0.428142 -0.750467 0.328038 0.002027 -0.000036 0.000072 -0.000206

-0.066448 0.072681 -0.221059 0.552394 0.387453 0.528069 -0.224779 0.395963 0.002730 -0.000042 -0.000414 -0.000196

0.344865 -0.905195 -0.230637 0.039938 0.039155 -0.047312 -0.026742 0.049152 -0.000075 0.000028 -0.000039 -0.000018

-0.000077 0.000118 -0.000486 -0.000044 0.001131 -0.000336 -0.000086 0.000133 -0.041877 -0.617012 0.780354 0.092675

-0.000077 0.000125 -0.000631 0.000093 -0.000236 -0.000065 -0.000028 0.000051 -0.048180 -0.393490 -0.411193 0.820831

-0.000001 0.000006 0.000134 0.000667 0.000026 -0.000072 -0.000176 0.000168 -0.031175 0.681104 0.470324 0.560286

-0.000321 -0.000457 0.000094 -0.001848 0.000636 -0.000692 0.001497 -0.003009 0.997465 -0.023622 0.027600 0.061050

projectionMatrix = {{0.009127,-0.082468,-0.001122,-0.929983},

{-0.049397,-0.049595,-0.066448,0.344865},

{-0.000077,-0.000077,-0.000001,-0.000321}};

BB = {{0.009127,-0.082468,-0.001122,},

{-0.049397,-0.049595,-0.066448,},

{-0.000077,-0.000077,-0.000001,}};

bb ={{-0.929983},{0.344865},{-0.000321}};

B times B transpose ={{0.006885532037, 0.003713708697, 5.648379E-6},

{0.003713708697, 0.009315064338, 7.688832000000001E-6},

{5.648379E-6, 7.688832000000001E-6, 1.1859E-8}};

Intrinsic Matrix k: 594.7772084843174,0, 476.29471287629644

0, 604.2530011459515, 648.3541613964078

0, 0, 1