The purpose of this document is to provide a simple MATLAB class for possible use with PST. Main themes behind this class involve multiple objects accessing certain data in a global structure based on a known index number and field.

```
% assumes a global g has been declared with data in a g.data.list array
classdef TestClass3 < handle %inherit from handle class
    properties
        dataNdx = 0; % placeholder
    end
    methods
        function r = getData(obj, varargin)
            %% getData(k) returns kth data point, if k not provided return all datas
            if obj.dataNdx ~= 0
                global g
                if nargin == 1
                    r = g.data.list(obj.dataNdx,:);
                elseif nargin > 1
                    r = g.data.list(obj.dataNdx,varargin{1});
                end
            else
                disp('dataNdx not defined')
            end
        end% end getData

        function setData(obj, k , data)
            %% setData(k, newData) sets kth data to new data
            if obj.dataNdx ~= 0
                global g
                g.data.list(obj.dataNdx,k) = data;
            else
                disp('dataNdx not defined')
            end
        end% end setData

    end% end methods
end % end class def
```

An example of some operations using the class are shown below:

```
%% Test class 3
clear; close all; clc; format compact
% make some global with data that will be updated
global g
g.data.list = zeros(5,4);
g.data.list(3,:) = 3;

% create test class object and initialize with ndx
a = TestClass3();
a.dataNdx = 3;

% use class functions
a.getData()
ans =
     3     3     3     3

% modifiy data
a.setData(1:4,[2,3,2,4]);

a.getData(4)
ans =
     4

b = a.getData()
b =
     2     3     2     4
```