Title for Assignment

SUBJ1234 Assignment X

Name and ID

Abstract

Contents

1 Introduction

1.1 Inserting a figure

Check out Figure 1.

Figure 1: Example Figure

1.2 Referencing

My reference.[?] ***TODO: Fix references.***

1.3 Tables

Table 1 is an example.

This	**is**	**a**	**table.**
	Made	using	`latextablegenerator.com`

Table 1: Definition of Time Parameters

1.4 Subfigures

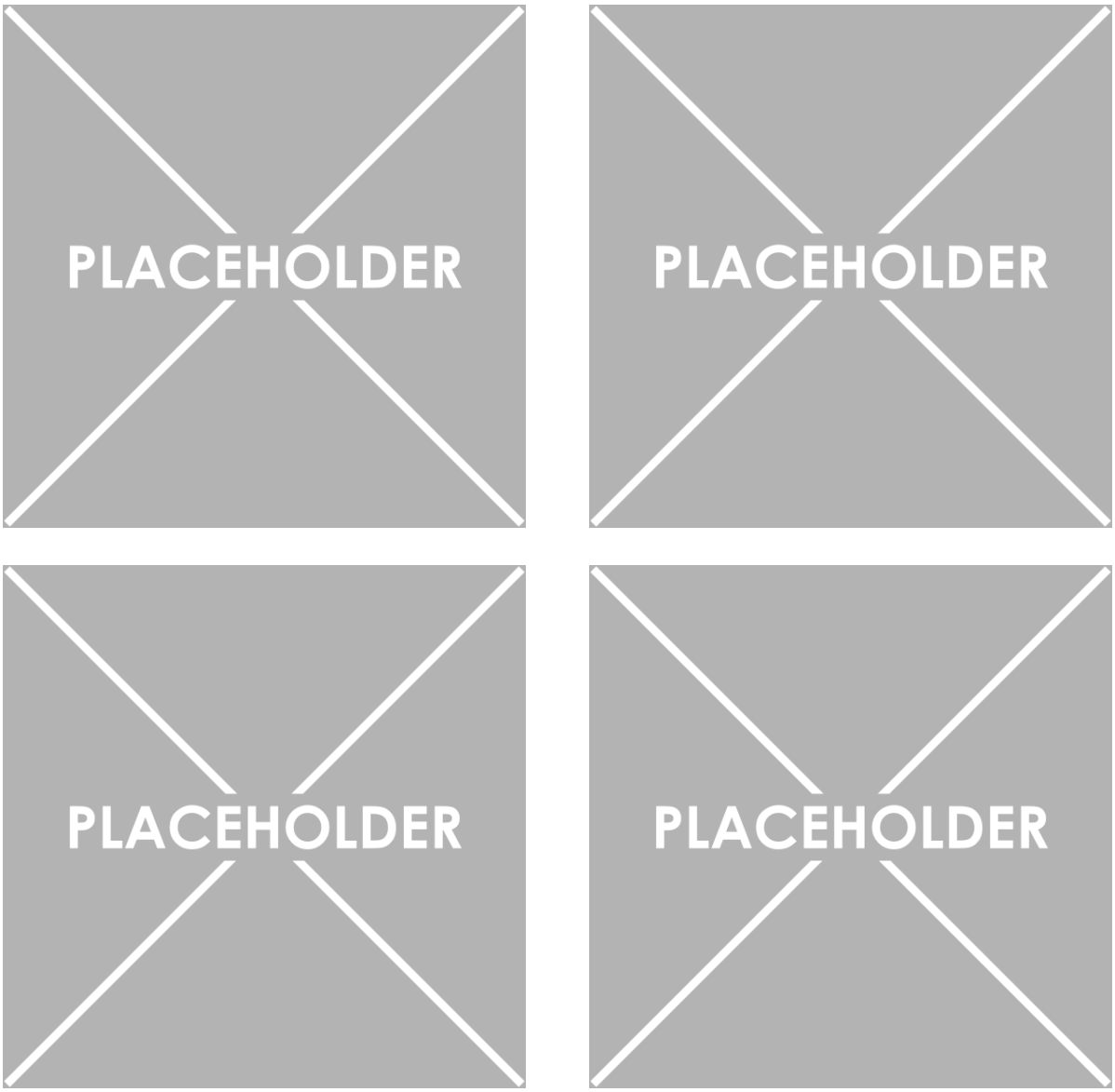

Figure 2: Example subfigures

2 Conclusion

3 Appendix: Matlab Code for Formatting Figures

```
% FORMAT A FIGURE: GIVES FIGURE LATEX FORMATTING
% A standalone function to run after plotting
%
% DEFAULT USAGE:
%     fh = figure;
%     plot(x,y,'-');
%     FormatFigure(fh,{'x','y'});
%
% INPUTS:
%   - figHandle: figure handle (figHandle = figure; OR figHandle = subplot(...);)
%   - axisLabels: axis label text cell array (axisLabels = {'x (m)','y (m)','z (m)'};)
%
% OPTIONAL INPUTS:
%   - legHandle: legend handle (lh = Legend(...);)
%   - The following are customisable with care.
%       - fontSize: size of all text - titles, axes, legends etc.
%       - lineWidth: size of all lines in the plot
%       - markerSize: size of all markers in the plot
%
% Author: Tara Bartlett
% Email: tara.bartlett22@gmail.com

function FormatFigure(figHandle,axisLabels,varargin)

    % set the parameters
    fontSize = 16;
    lineWidth = 2;
    markerSize = 30;
    legend = 0;
    plotDimensions = length(axisLabels);
    % TODO: FIX: numel(axes(figHandle))/2; % checks if it's 2D or 3D

    % check axis labels and plot dimensions match
    if length(axisLabels) ≠ plotDimensions
        error('Number of axis labels must match plot dimensions.');
    end

    % read in options
    while ¬isempty(varargin)
        switch lower(varargin{1})
            case 'legend'
                legendHandle = varargin{2};
                legend = 1;
            case 'fontsize'
                fontSize = varargin{2};
            case 'linewidth'
                lineWidth = varargin{2};
            case 'markersize'
                markerSize = varargin{2};
            otherwise
                error(['Unexpected option: ' varargin{1}])
        end
        varargin(1:2) = [];
    end

    % select the figure
    figure(figHandle);
    grid on; grid minor;

    % Format tick labels
    set(gca,'TickLabelInterpreter','latex','FontSize',fontSize,'LineWidth',1.5);

```

```
63      % set and format the axis labels
64      set(xlabel(axisLabels{1}),'Interpreter','Latex','FontSize',fontSize);
65      set(ylabel(axisLabels{2}),'Interpreter','Latex','FontSize',fontSize);
66
67      % if it's a 3d plot, do the same for z
68      if plotDimensions == 3
69          set(zlabel(axisLabels{3}),'Interpreter','Latex','FontSize',fontSize);
70      end
71
72      % format the legend
73      if legend
74          set(legendHandle,'Interpreter','latex','Location','best','FontSize',fontSize);
75      end
76
77      % Format markers and lines
78      set(findall(figHandle,'Type','Line'), 'LineWidth',lineWidth);
79      set(findall(figHandle,'Type','Marker'), 'MarkerSize',markerSize);
80  end
```