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```
function [] = PS11b_blind_exec_revisit_hkolagan()
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% ENGR 132
% Program Description
% Calculate the absorption fraction of the blind for a range of slat
%   angles at given shadow angles.
%
% Function Call
%  PS11b_blind_exec_revisit_hkolagan()
%
% Input Arguments
% NONE
%
% Output Arguments
% NONE
%
% Assigment Information
%   Assignment:     PS 11b, Problem 1
%   Author:         Harith Kolaganti, hkolagan@purdue.edu
%   Team ID:        005-12
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

INITIALIZATION

```
row = 1;
column = 1;
```

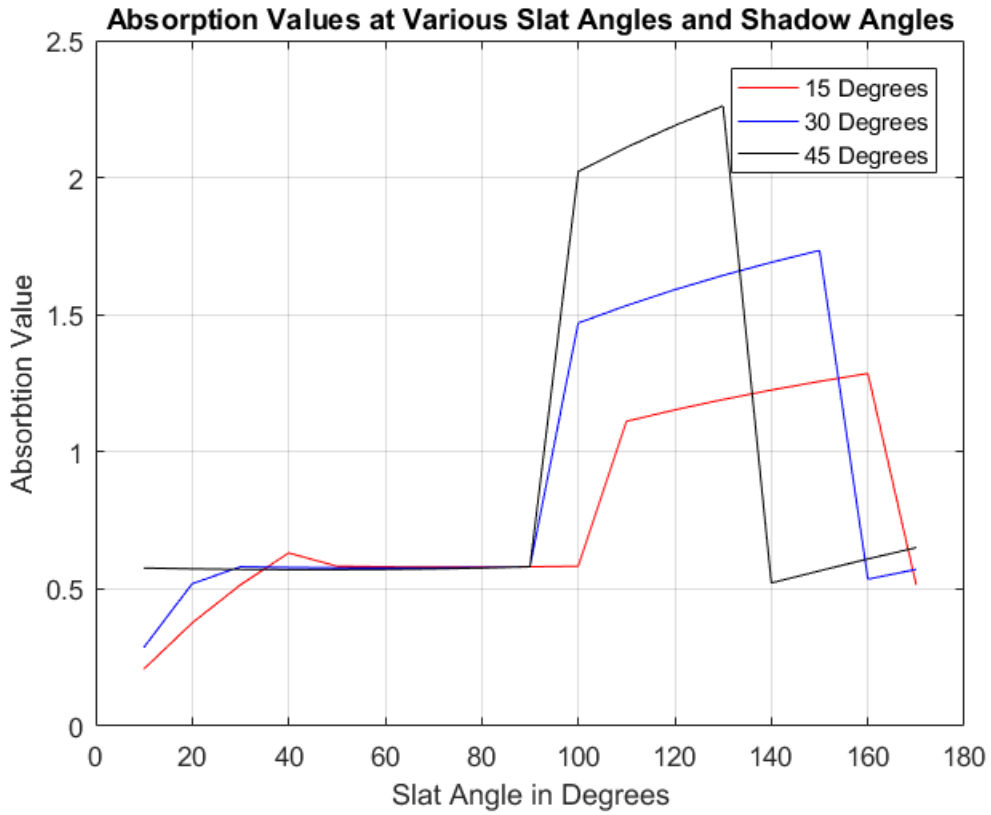
CALCULATIONS

```
for slatAng = 10:10:170
```

```
    for shadAng = 15:15:45
        blind_para = [90 100 deg2rad(slatAng) deg2rad(shadAng) 0.5];
        M = (blind_para(1) * cos(blind_para(4))) / sin(blind_para(3) +
 blind_para(4));

        %Executes first UDf function
        [Fvec] = PS11b_all_fracs(blind_para,M);

        %Executes second UDF Function
        if M >= blind_para(2)
            [absorption] = PS11b_full_illum(Fvec, blind_para);
        end

        %Executes third UDF Function
        if M < blind_para(2)
            [absorption] = PS11b_part_illum(Fvec, blind_para(5));
        end

        matrix(row, column) = absorption;
        row = row + 1;
    end

    column = column + 1;
    row = 1;
end
```

FORMATTED TEXT DISPLAY

```
plot(10:10:170, matrix(1,:),'r-')
hold on;
plot(10:10:170, matrix(2,:),'b-')
plot(10:10:170, matrix(3,:),'k-')
grid on;
legend('15 Degrees', '30 Degrees', '45 Degrees')
xlabel('Slat Angle in Degrees')
ylabel('Absorbtion Value')
title('Absorption Values at Various Slat Angles and Shadow Angles')
```



COMMAND WINDOW OUTPUTS

ACADEMIC INTEGRITY STATEMENT

I/We have not used source code obtained from any other unauthorized source, either modified or unmodified. Neither have I/we provided access to my/our code to another. The project I/we am/are submitting is my/our own original work.

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