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```
function PS07_observatory_cjennewe_ehotson(xCoord,yCoord)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% ENGR 132
% Program Description
% This program takes the x and y coordinates of a camera location as
 xCoord
% and y Coord in meters and uses those coordinates to determine
 whether the
% camera is in the observatory, exhibit hall, mechanical room,
 offices, on
% the wall, or outside the building. It then outputs the name of the
 room
% the camera is in or "invalid" if the camera is on the wall or
 outside.
%
% Function Call
% PS07_observatory_cjennewe_ehotson.m(X,Y)
%
% Input Arguments
% 1. xCoord (m)
% 2. yCoord (m)
% Output Arguments
% none
%
% Assignment Information
%   Assignment:   PS 07, Problem 1
%   Team ID:   009-01
%   Paired Partner:  Cole Jennewein, cjennewe@purdue.edu
%   Paired Partner:  Ethan Hotson, ehotson@purdue.edu
%
%   Our contributor(s) helped us:
%     [ ] understand the assignment expectations without
%         telling us how they will approach it.
%     [ ] understand different ways to think about a solution
%         without helping us plan our solution.
```

```
%     [ ] think through the meaning of a specific error or
%         bug present in our code without looking at our code.
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

INITIALIZATION

CALCULATIONS

FORMATTED TEXT DISPLAYS

COMMAND WINDOW OUTPUTS

```
if( sqrt( xCoord^2 + yCoord^2 ) < 5 )
    fprintf("Observatory\n");
elseif( xCoord <= -6 || xCoord >= 6 || yCoord <= -8 || yCoord >= 10 ||
 sqrt( xCoord^2 + yCoord^2 ) == 5 || yCoord == 2)
    fprintf("Invalid\n");
elseif( yCoord > 2 )
    fprintf("Exhibit Hall\n");
elseif( xCoord == 0 )
    fprintf("Invalid");
elseif( xCoord > 0 )
    fprintf("Offices");
else
    fprintf("Mechanical Room");
end;

%Test Cases
%PS07_observatory_cjennewe_ehotson(0,7)       Exhibit Hall

Not enough input arguments.

Error in PS07_observatory_cjennewe_ehotson (line 52)
if( sqrt( xCoord^2 + yCoord^2 ) < 5 )
```

ACADEMIC INTEGRITY STATEMENT

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

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