```
%*********************************************
%*  Name:  Nick Shiffer   Date:  10/2/17       *
%*  Seat:  11    File:  APP_A16_1_.m           *
%*  Instructor:  Dr Harper 10:20Am             *
%*********************************************
fprintf ('\n')
fprintf ('\n*************************************************')
fprintf ('\n*  Name:  Nick Shiffer   Date:  10/2/17        *')
fprintf ('\n*  Seat:  11    File:  APP_A16_1_.m           *')
fprintf ('\n*  Instructor:  Dr. Harper 10:20AM             *')
fprintf ('\n*************************************************')
fprintf ('\n')
%while loop for program until user decides to quit
%assign begining variables
a='o';
while(a~='quit')
    %use switch case to prompt user for shape
    shape = input('For what shape would you like to find the Moment of
 Inertia?\n Please type R for a rectangle, H for a hollow rectangular
 section, and C for a Circle: ','s');
    switch shape
        case 'R'
            %prompt for axis
            axisR=input('Please enter the axis of the moment of
 inertia. Use xx or yy. ','s');
            %prompt for units
            unitsR=input('Please enter the appropriate units. ','s');
            %prompt for inputs
            inputRb=input('Please enter the base of the rectangle');
            inputRd=input('Please enter the length of the side');
            if(axisR=='xx')
               inertiaRxx = (inputRb * (inputRd)^3)/12;
               fprintf(1,'A rectangle, on the xx axis, with a
 base measurment of %f %s and a length measurement of %f %s has
 a moment of inertia of %f %s ^4 \n',inputRb,unitsR, inputRd,
 unitsR,inertiaRxx,unitsR)
            elseif(axisR=='yy')
               inertiaRyy = ((inputRb)^3 * inputRd)/12;
               fprintf(1,'A rectangle, on the xx
 axis, with a base measurment of %f %s and a length
 measurement of %f %s has a moment of inertia of %f %s ^4
 \n',inputRb,unitsR,inputRd,unitsR,inertiaRyy,unitsR)
            end
        case 'H'
            %prompt for axis
            axisH=input('Please enter the axis of the moment of
 inertia. Use xx or yy. ','s');
            %prompt for units
            unitsH=input('Please enter the appropriate units. ','s');
            %prompt for inputs
            inputHb=input('Please enter the base of the rectangle');
            inputHd=input('Please enter the length of the side');
```

```
            inputHhb=input('Please enter the base of the hollow
 section of the rectangle');
            inputHhd=input('Please enter the length of the hollow
 section of the rectangle');
            if(axisH=='xx')
               inertiaHxx = ((inputHb * (inputHd)^3)/12)-((inputHhb *
 (inputHhd)^3)/12);
               fprintf(1,'A hollow rectangle, on the xx axis, with
 a base measurment of %f %s, a length measurement of %f %s, a hollow
 base of %f %s and a hollow length of %f %s has a moment of inertia
 of %f %s ^4 \n',inputHb,unitsH, inputHd,unitsH,inputHhb,unitsH,
 inputHhd,unitsH,inertiaHxx,unitsH)
            elseif(axisH=='yy')
               inertiaHyy = ((inputHb * (inputHd)^3)/12)-(inputHb *
 (inputHd)^3)/12;
               fprintf(1,'A hollow rectangle, on the yy axis, with
 a base measurment of %f %s, a length measurement of %f %s, a hollow
 base of %f %s and a hollow length of %f %s has a moment of inertia
 of %f %s ^4 \n',inputHb,unitsH, inputHd,unitsH,inputHhb,unitsH,
 inputHhd,unitsH,inertiaHyy,unitsH)
            end
        case 'C'
            %prompt for units
            unitsC=input('Please enter the appropriate units. ','s');
            %prompt for inputs
            inputCd=input('Please enter the diameter of the circle.
 ');
            inertiaC = (pi()* (inputCd)^3)/64;
            fprintf(1,'A circle, on either axis, with a diameter
 measurment of %f %s has a moment of inertia of %f %s ^4
 \n',inputCd,unitsC,inertiaC,unitsC)

        otherwise
            shape=input('You have not entered a valid shape, please
 enter R,H, or C: ','s');
    end
    a=input('If you would like to quit type "quit"\n If you would like
 to continue type any other word. ','s');
end
```

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*********************************************

Error using input
Cannot call INPUT from EVALC.

Error in shiffer_app16 (line 18)
```

```
   shape = input('For what shape would you like to find the Moment of
Inertia?\n Please type R for a rectangle, H for a hollow rectangular
section, and C for a Circle: ','s');
```

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