Total Points: / 30

Submission Instruction: Please submit this report on Canvas in a single pdf format. The filename should be "Exam1_FullName_RedID.pdf".
Please copy your Matlab code in the given box. Adjust the box size as needed.
Please also submit all your m files separately. **Don't zip them**.

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Custom Functions (Write your code in the box.)

1. Most engineering systems have redundancy. That is, an engineering system has more than is required to accomplish its purpose. Consider aircraft whose speed is monitored by three sensors. An alarm should go off if any two of the sensor readings disagree. Write a function with header [response] = mySpeedAlarm(S1, S2,S3) where S1, S2, and S3 are the speed readings for sensor 1, sensor 2, and sensor 3, respectively. The output response should be the string 'alarm!' if any two of the speed readings disagree by strictly more than 10 and 'normal' otherwise. (/ 30)

Test Cases:

```
>> response = mySpeedAlarm(94,96,90)
response =
normal
>> response = mySpeedAlarm(94,96,80)
response =
alarm!
>> response = mySpeedAlarm(100,96,90)
response =
normal
```

```
function [response] = mySpeedAlarm(S1, S2,S3)
  if abs(S1-S2) > 10
     response ='alarm!';
  elseif abs(S1-S3) > 10
     response ='alarm!';
  elseif abs(S2-S3) > 10
     response ='alarm!';
  else
     response = 'normal';
  end
end
```