ECE 175: Computer Programming for Engineering Applications

Lab 1

Topics: Basic C and Branch structure
Demo to TA or ULA your code for each problem by the end of your lab session in order to earn your lab 1 score.

Problem 1 (15 points): Write a C program that accepts three integers, find the minimum and then subtract it from all three integers.

Sample code execution 1: **bold entered by a user**
Enter three integers: **120 50 130**
Minimum is 50
New numbers are 70 0 80

Sample code execution 2: **bold entered by a user**
Enter three integers: **30 175 255**
Minimum is 30
New numbers are 0 145 225

More test cases:
If the inputs are 255, 255, 255, then the minimum is 255 and the new numbers are 0, 0, 0
If the inputs are 190, 100, 65, then the minimum is 65 and the new numbers are 125, 35, 0

Problem 2 (15 points): Write a C program that reads an automobile's speed (in mph) on a freeway and determines the fine amount based on the fine percentage as given below:

Speed (mph)	Fine Percentage (based on speed)
>=90	40
[80 – 90)	30
[70 – 80)	Warning
< 70	No fine

For example: If the speed is 110, Then the fine amount is 110 + (110) * (0.4) = $154.
If the speed is 84, then the fine amount is 84 + (84) * (0.3) = $109.2

Sample execution 1: **bold** entered by a user
Enter the speed: **110**
Fine amount is: $154.00

Sample execution 2: **bold** entered by a user
Enter the speed: **55**
Fine amount is: No Fine

Sample execution 3: **bold** entered by a user
Enter the speed: **70**
Fine amount is: Warning

Sample execution 4: **bold** entered by a user
Enter the speed: **95**
Fine amount is: $133.00

Sample execution 5: **bold** entered by a user
Enter the speed: **84**
Fine amount is: $109.20