1) (20 pts) Write an HC11 procedure that calculates the factorial of the number stored in accumulator A. It needs to be recursive and the end number needs to be returned in the accumulator D.

2) (10 pts) Write an HC11 code to implement the following “C” type code. Assume that a, b, i, and count are all “words” declared already in the .data section.

```c
for (i=0; i<=10; i++)
    begin
        if (a < b)
            a = a + 1;
        if (a == 3 || b =5)
            count = count - 1;
    end
```

3) (20 pts) Research and list 5 different microcontrollers and their configurations (speed, RAM, EEPROM, IO, ADC, etc) for different manufactures.