Assignment #5

This is the assignment I discussed in class. Please design instruction set for an imaginary computer with 16bit data path. You need to allocate sufficient bits for the instruction set, remaining bits will be used for operands. Assume your machine is a accumulator machine as we discussed in class. Write a table showing the Mnemonics, binary code for the instruction, and explanation of the instruction. Write an assembly program using these instruction set – you are free to choose a program of your own. Finally, using diagrams as discussed and shown in class, explain exactly what happens in each of the registers (PC, AC, IR, etc) as you step through your program.