ECE 376 - Homework #2

Assembler, Flow Charts. Due Monday, September 8th

Assembler Programming

1) Determine the contents of registers W, A, and B after each assembler command:

Command	W	A	B
; Start	13	11	9
movf A, W			
andlw 26			
addwf B,F			
comf A,W			
negf B,F			
subwf A,F			

2) Convert the following C code to assembler (8-bit operations)

```
unsigned char A, B, C;

C = 2*A + 3*B + 4;
```

3) Convert the following C code to assembler: (16-bit operations)

```
unsigned int A, B, C;

C = 2*A + 3*B + 4;
```

4) Convert the following C code to assembler

```
unsigned char A, B, C;

if( B > 10 )
   C = A + 2;
else
   C = A + 5;
```

Flow Charts & Counters

5) The flow chart below turns your PIC into a rigged voting machine

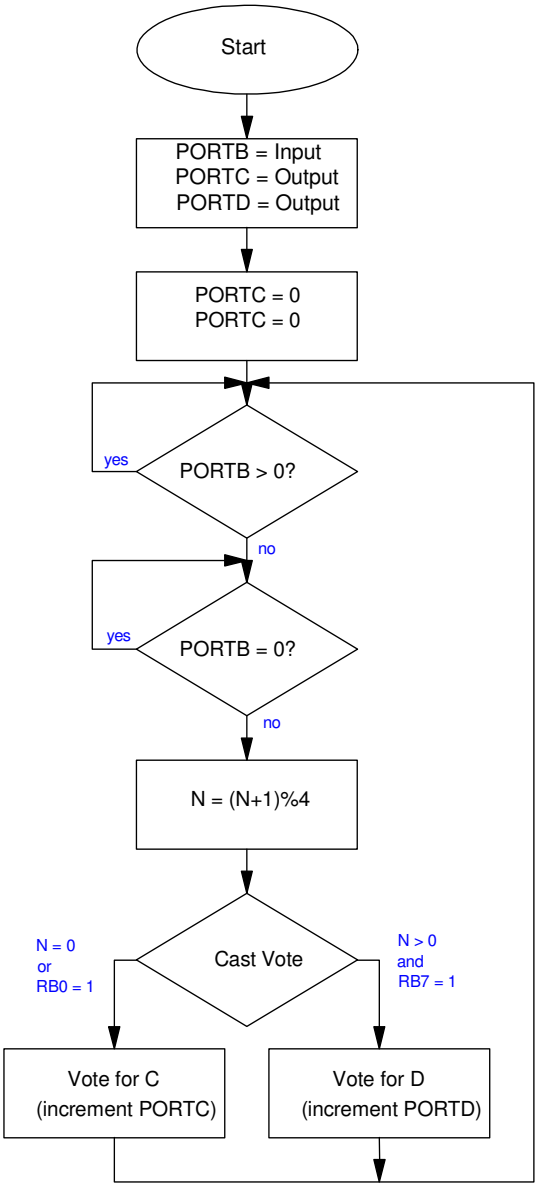
- When you press RB0, one vote is cast for Candidate C
- When you press RB7, one vote is cast for Candiadate D
- Every 4th vote always goes to Candidate C

Write the corresponding assembler code.

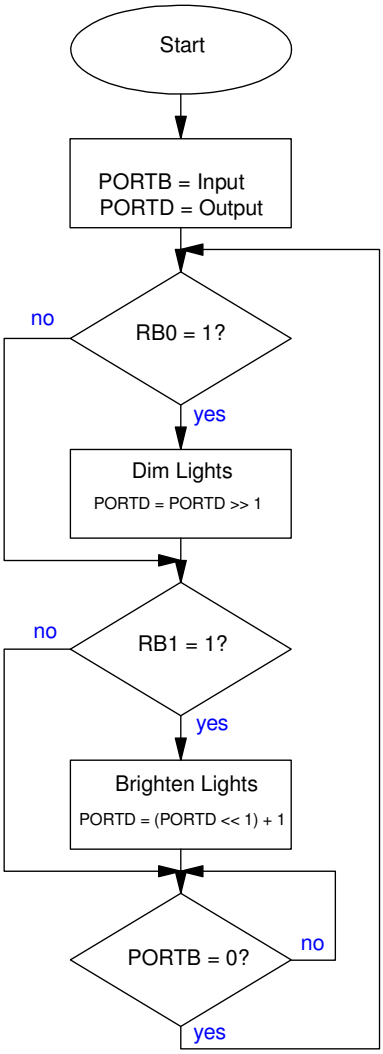
6) The flow chart below turns your PIC into an electronic flashlight

- RB0: Make the light dimmer
- RB1: Make the light brighter

Write the corresponding assembler code



Problem #5



Problem #6