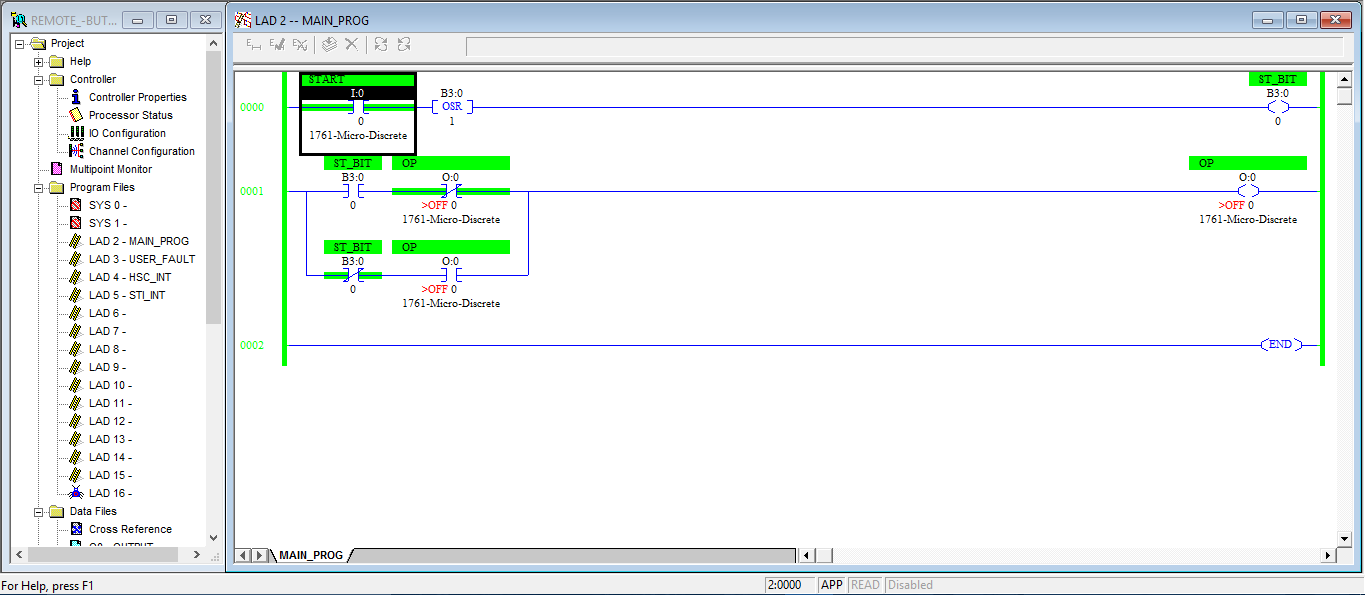
**EXPERIMENT-12**

**AIM** – To develop automation Project for Industrial problem using Wonderware InTouch and RsLogix500

**EXERCISE –** Class exercise on:

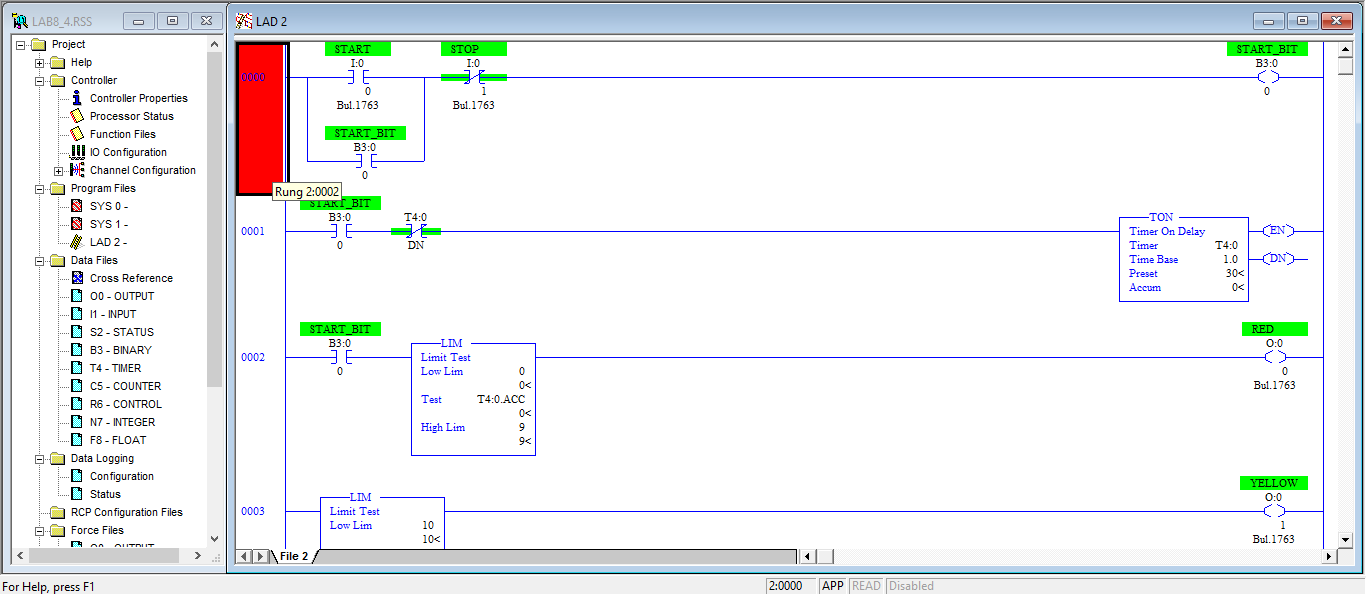
**1)Bit Instruction**

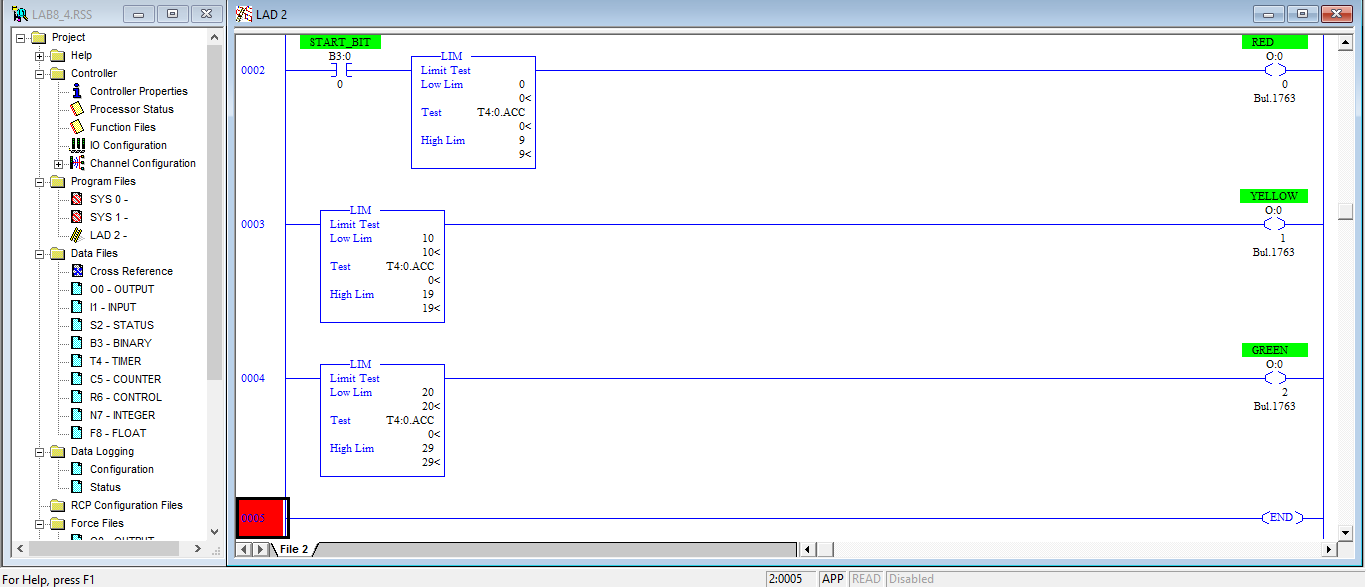
(1)Remote control button using OSR instruction.



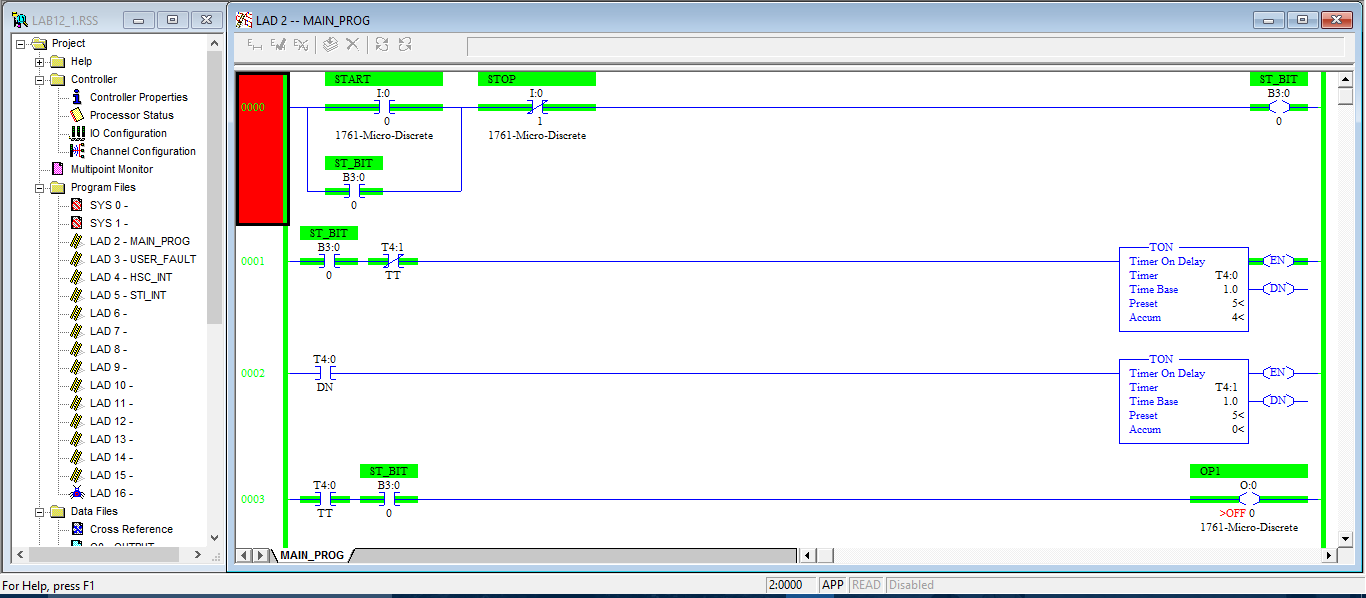
**2)Timers & Comparison Instruction**

(1)Traffic Light Controller

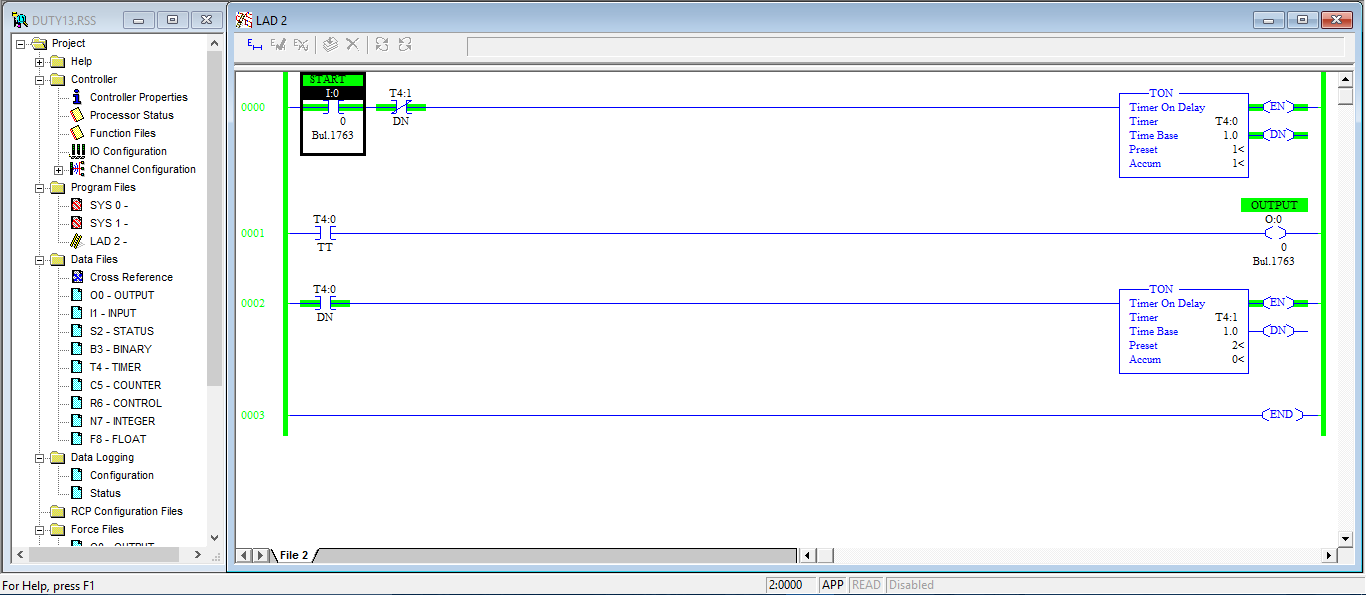




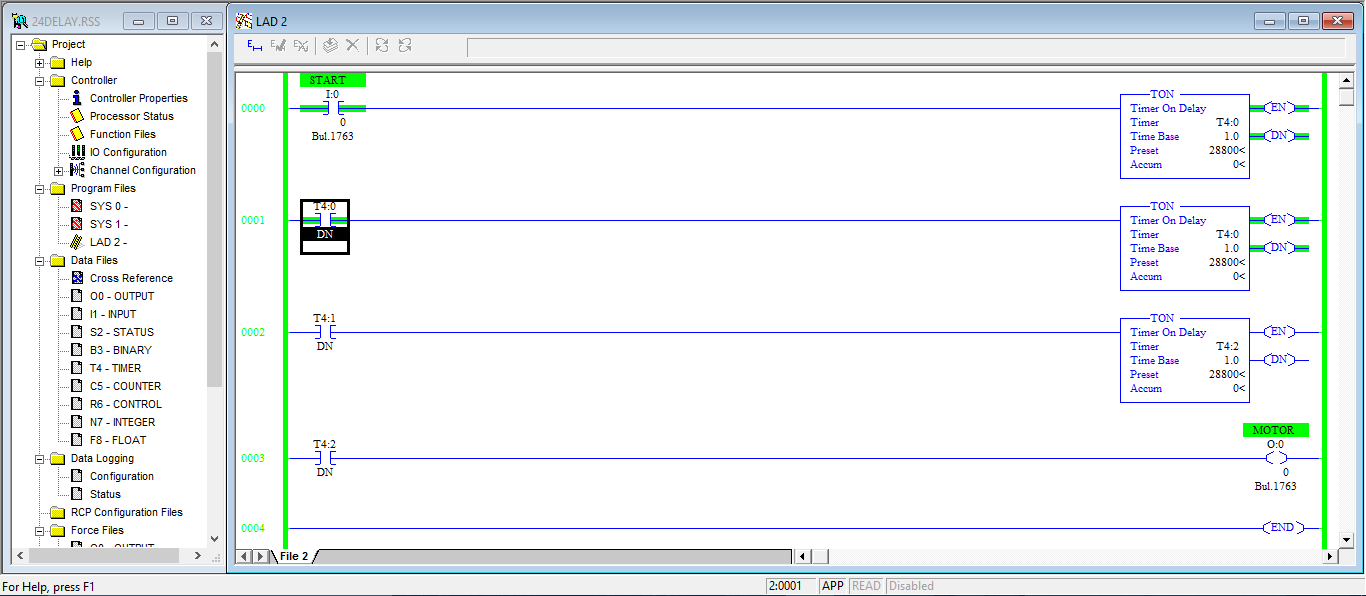
(2)Draw a ladder diagram for oil pumping system in which oil is pump through two solenoid valves for the duration of 5s each.



(3)Generate a pulse of 1/3 duty cycle.



(4)Provide the time delay of 24hr to operate motor.



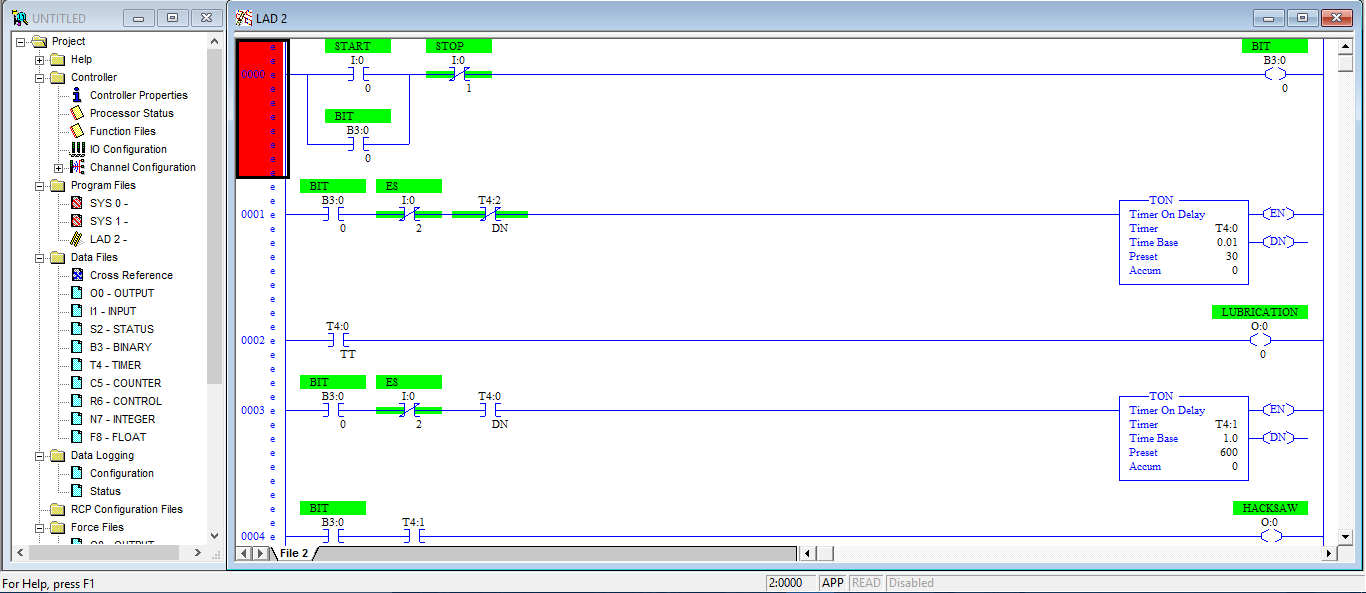
(5)Write a ladder diagram to sequencing operation for the wood cutter.

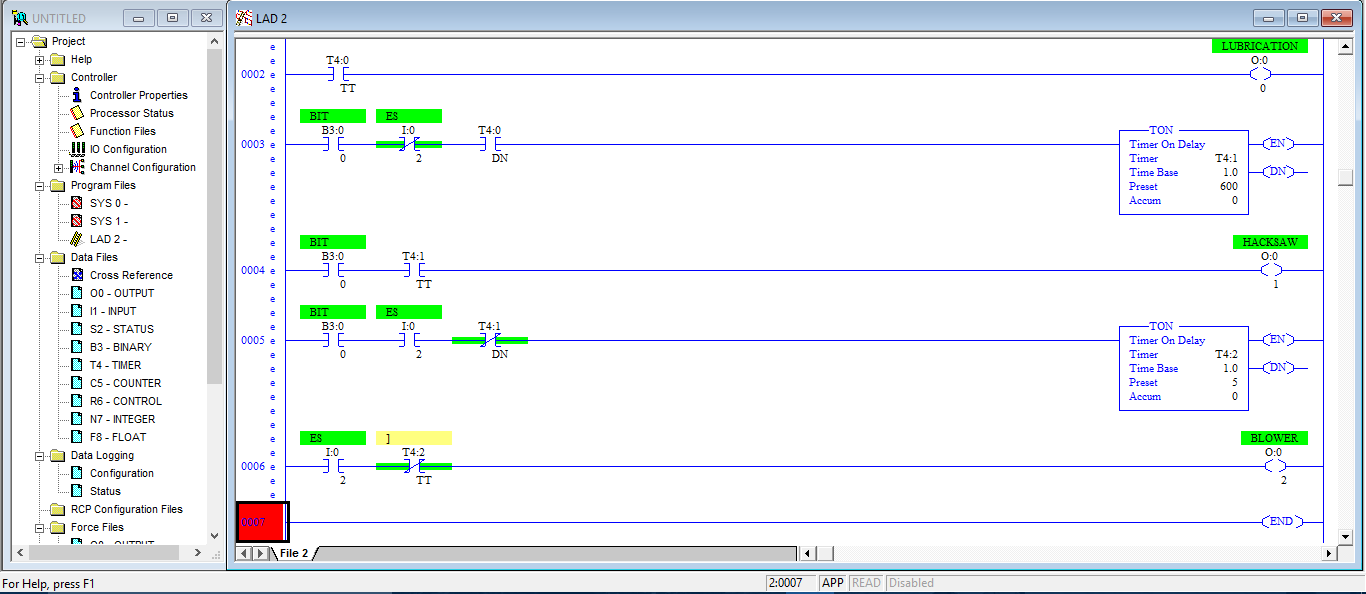
1.First start lubrication pump and after 3s wood log is placed at cutting position and then hacksaw starts.

2.Hacksaw continue for 10min after that blower fan blows off the wooden chips for 5s then log is carried out to storage via the conveyor system.

ES – I:0.0/2 Lubrication – O:0.0/0 Start – I:0.0/0

Hacksaw – O:0.0/1 Blower-O:0.0/2 stop – I:0.0/1





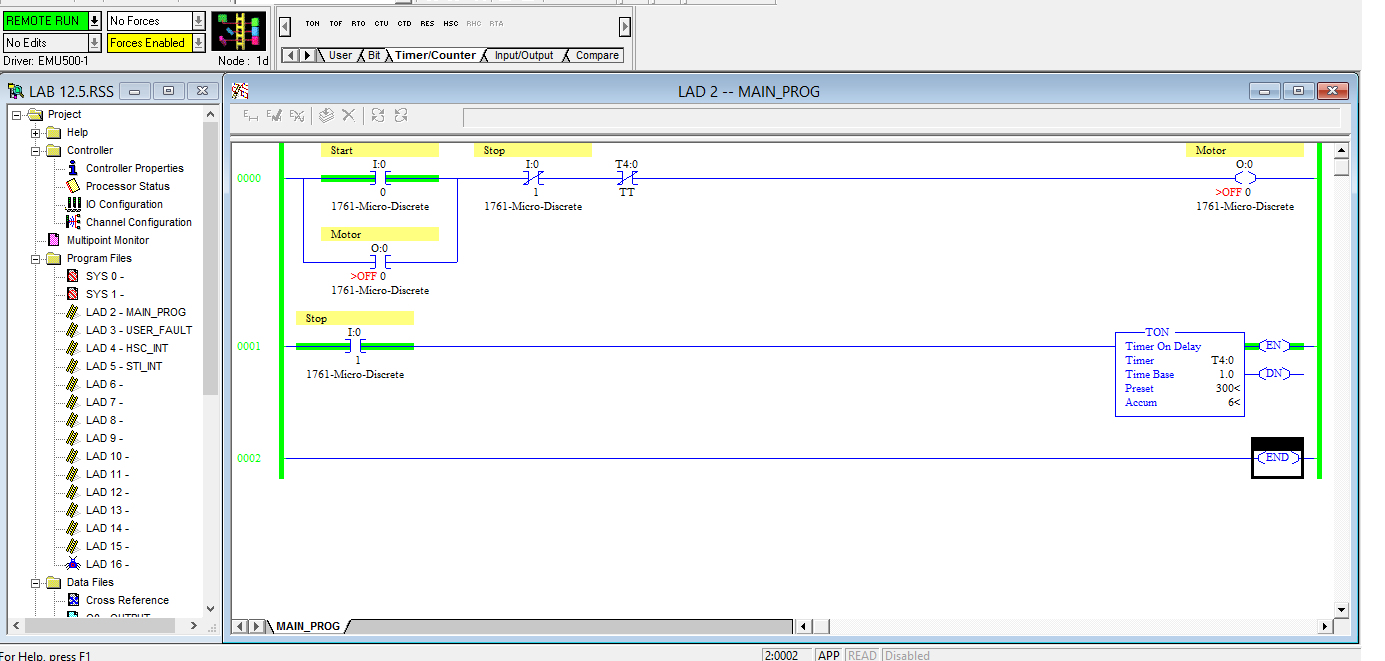
(6).When start button is pressed a motor goes ON it remains ON until the stop

Button is pressed,this motor can not be started sgain before 5 min. Are

left when it is stop previously.

DI:-I:0.0/0-START DO:-O:0.0/0-MOTOR

I:0.0/1-STOP



(7).Draw a ladder diagram for container packing system whose schimatic given in the

Fig. the function of the system as follows:

Whenever a container is placed on the conveyor its presence will be sensed

by a proxy-1 sensor and the conveyor belt will start when container reaches to spray nozzle position the conveyor stops and the spray nozzle will apply paint on the container for 5sec.After this the conveyor restart and the container taken to label is been placed for 2sec.After label is been placed for 2sec.After label is been placed on the container the conveyor carries the container to the packing system,where the ejector will eject the container from the conveyor belt and move it to packing.for powering up the system seprated start and stop button are provide.

DI:-I:0.0/0-START DO:-O:0.0/0-conveyor

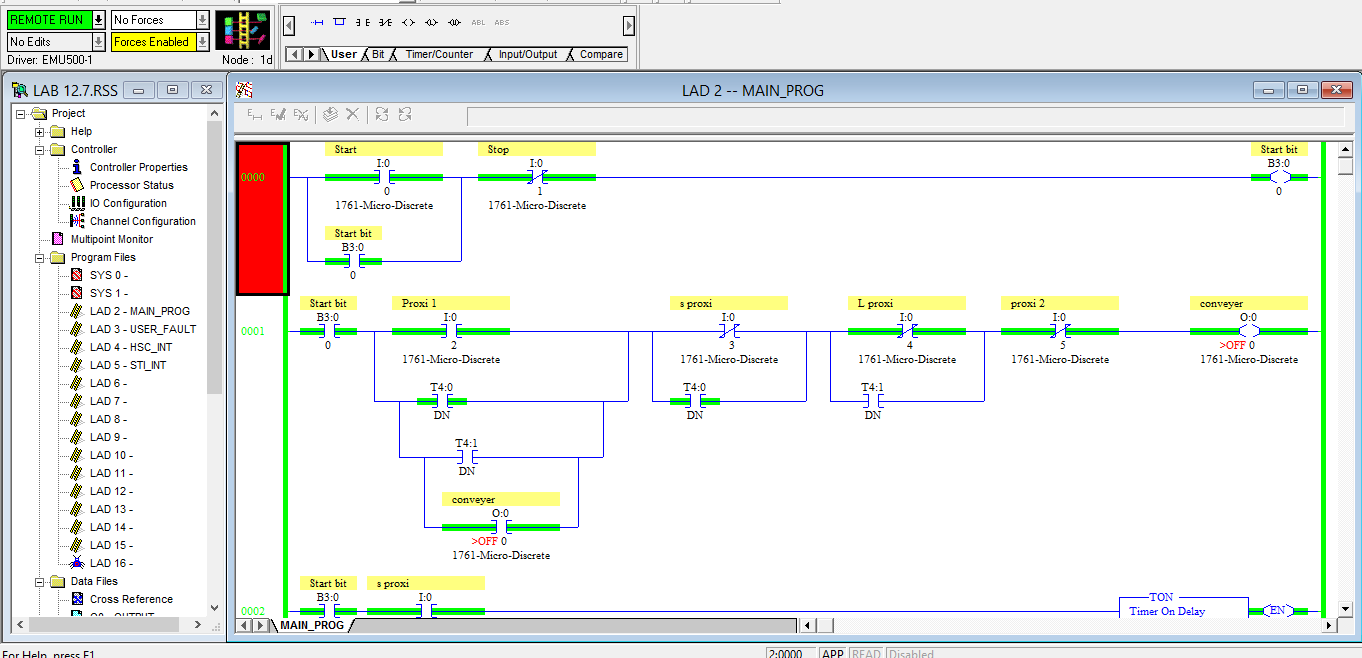
I:0.0/1-STOP O:0.0/1-spray

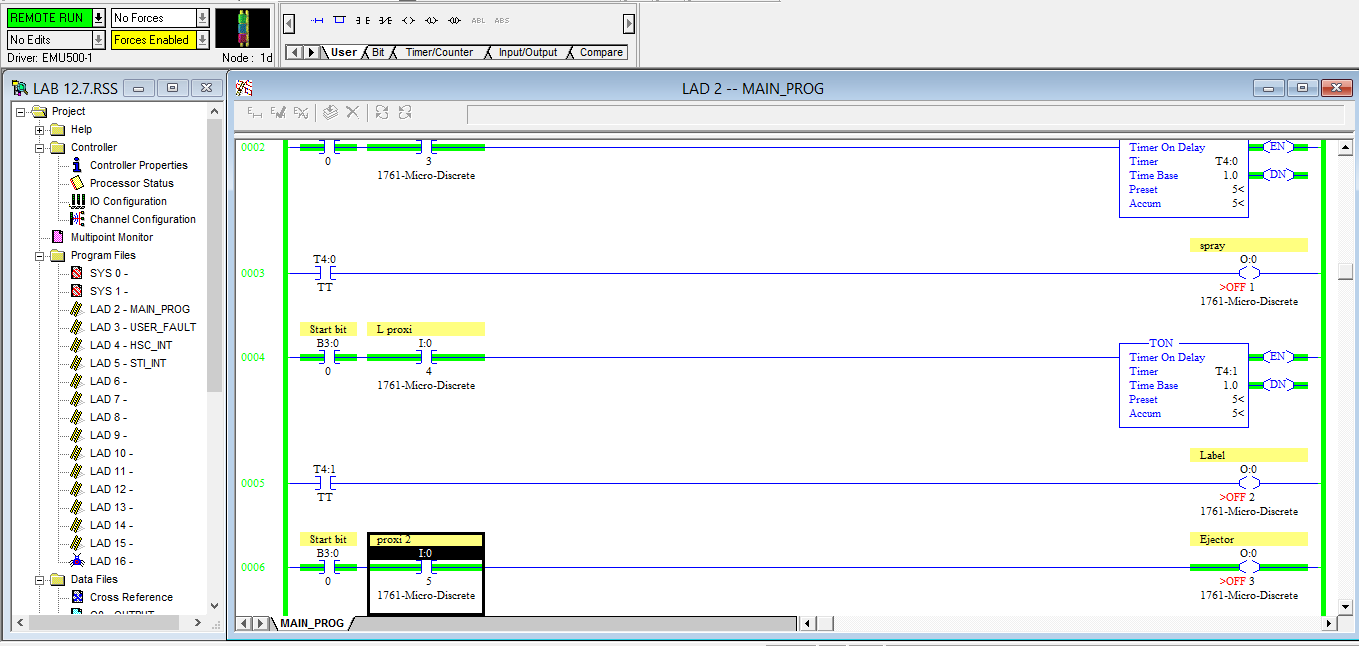
I:0.0/2-Proxi 1 O:0.0/2-Label

I:0.0/3-s proxy O:0.0/3-Ejector

I:0.0/4-L Proxi

I:0.0/5-proxi2



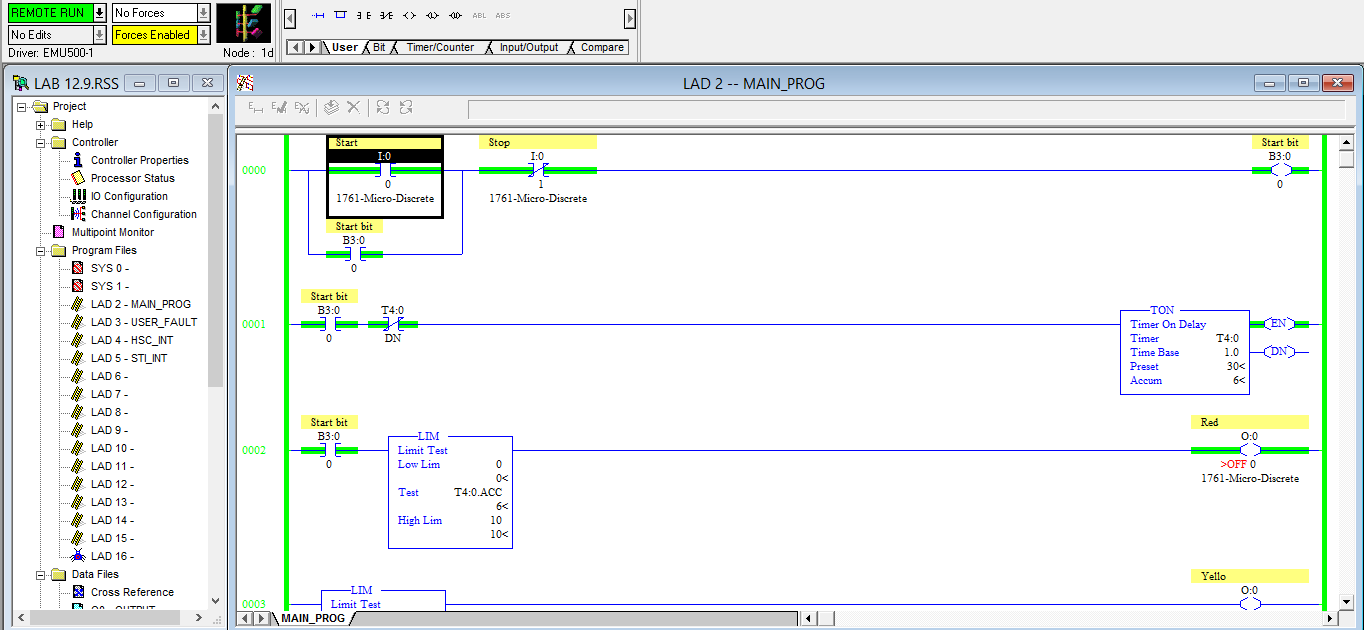


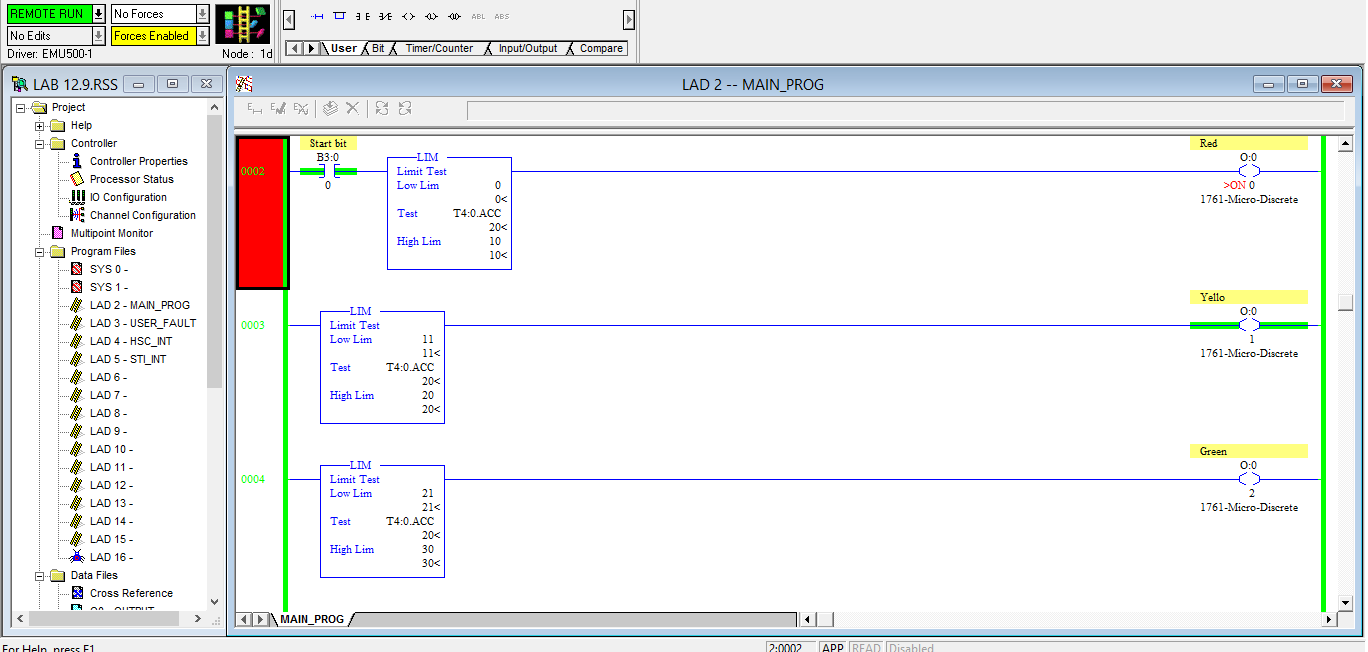
(8).Write a ladder to enable a traffic controller using compare instructions.

DI:-I:0.0/0-START DO:-O:0.0/0-RED

I:0.0/1-STOP O:0.0/1-YELLOW

0:0.0/2-GREEN





(9).When a light turned OFF in a bulding and a exit door light remain ON for on

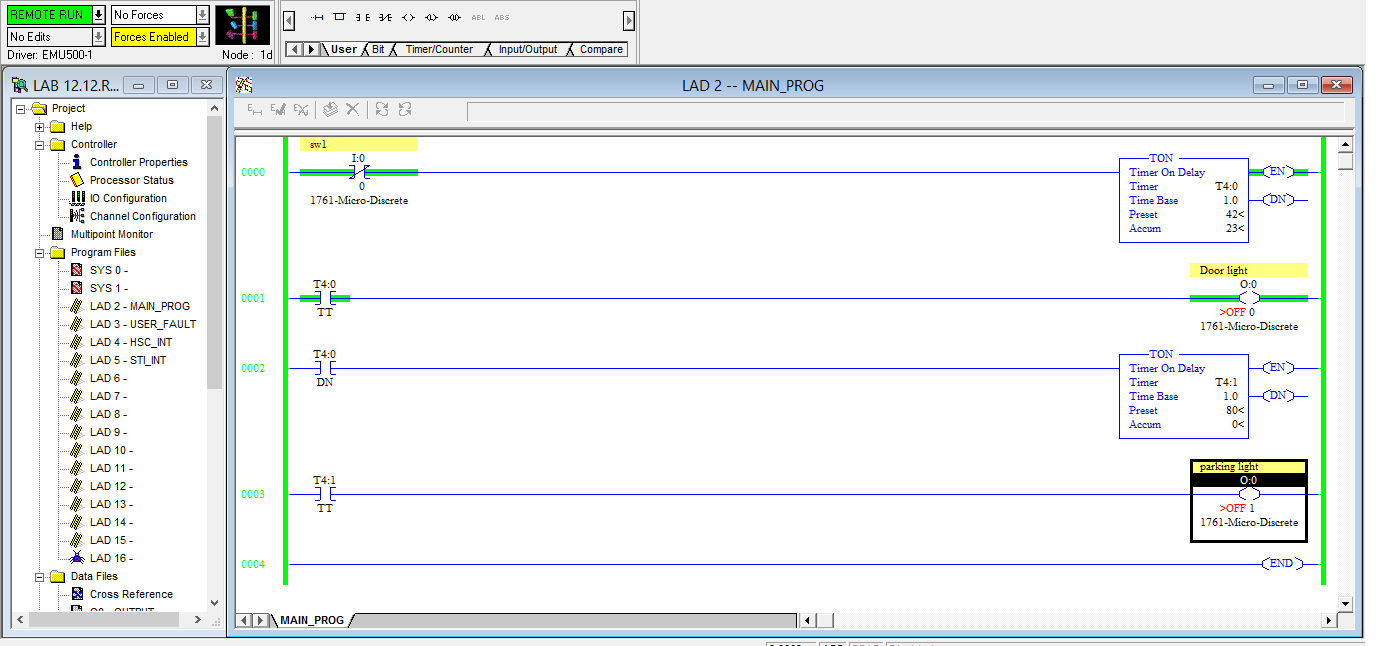
additional 42sec.In additional the parking plot lights are to remain ON for

an additional 3min. after the door light goes OFF.Draw a ladder diagram

for this operation.

DI:-I:0.0/0-sw1 DO:-O:0.0/0-Door light

O:0.0/1-parking light

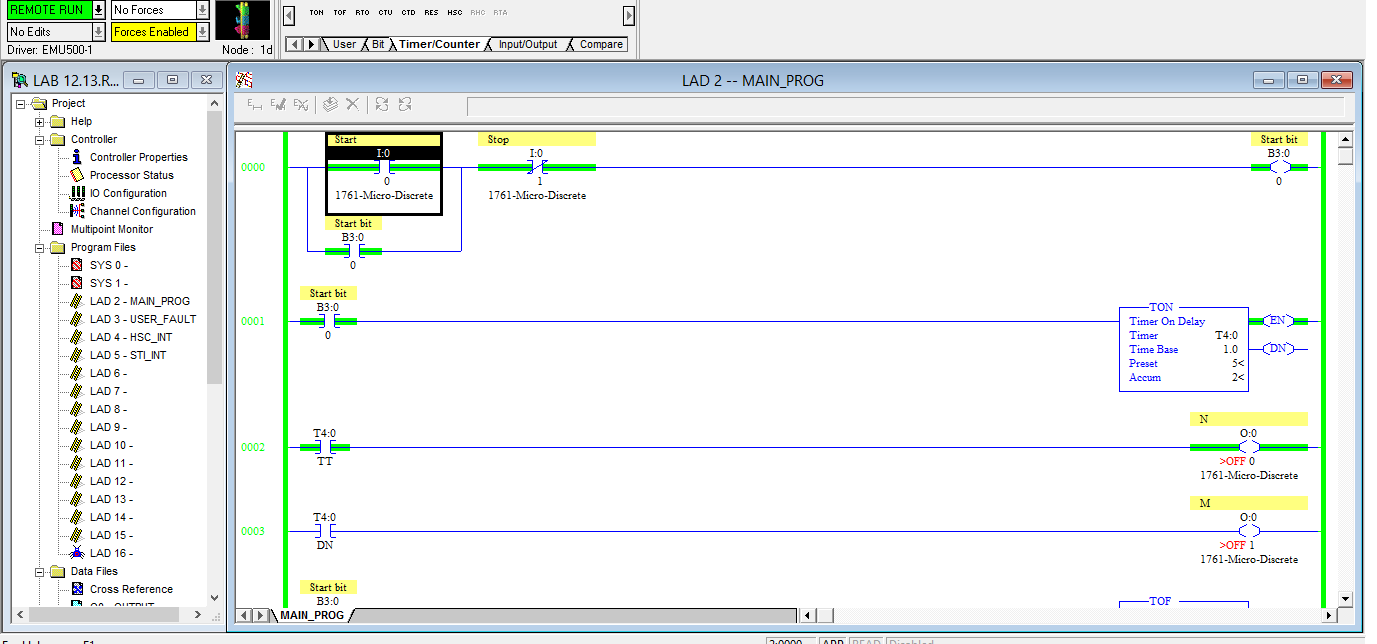


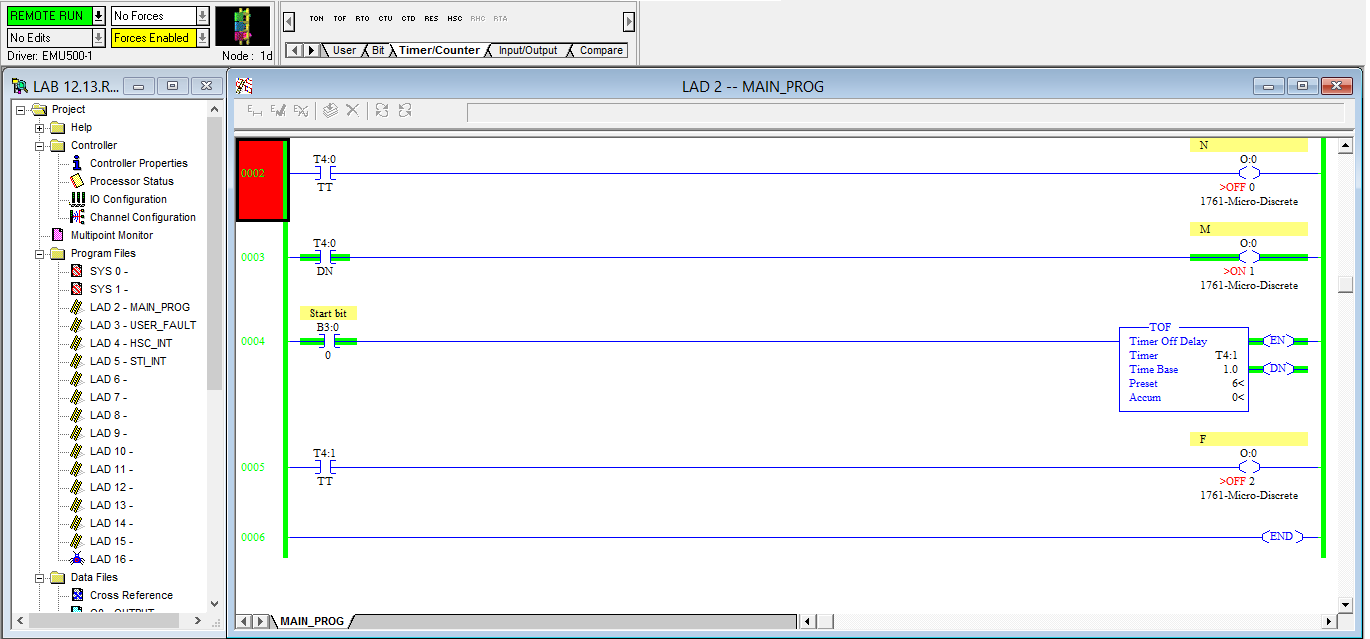
(10).When the start button is depressed output M goes ON 5sec later and N goes ON.When stop is pushed both M & N go OFF.In addition,6sec after M & N go OFF,fan F which had previously been OFF goes ON.F remains ON until the start button is again depressed.

DI:-I:0.0/0-START DO:-O:0.0/0-N

I:0.0/1-STOP O:0.0/1-M

O:0.0/2-F





(11).O=(A’B + BC)(CD + E)’

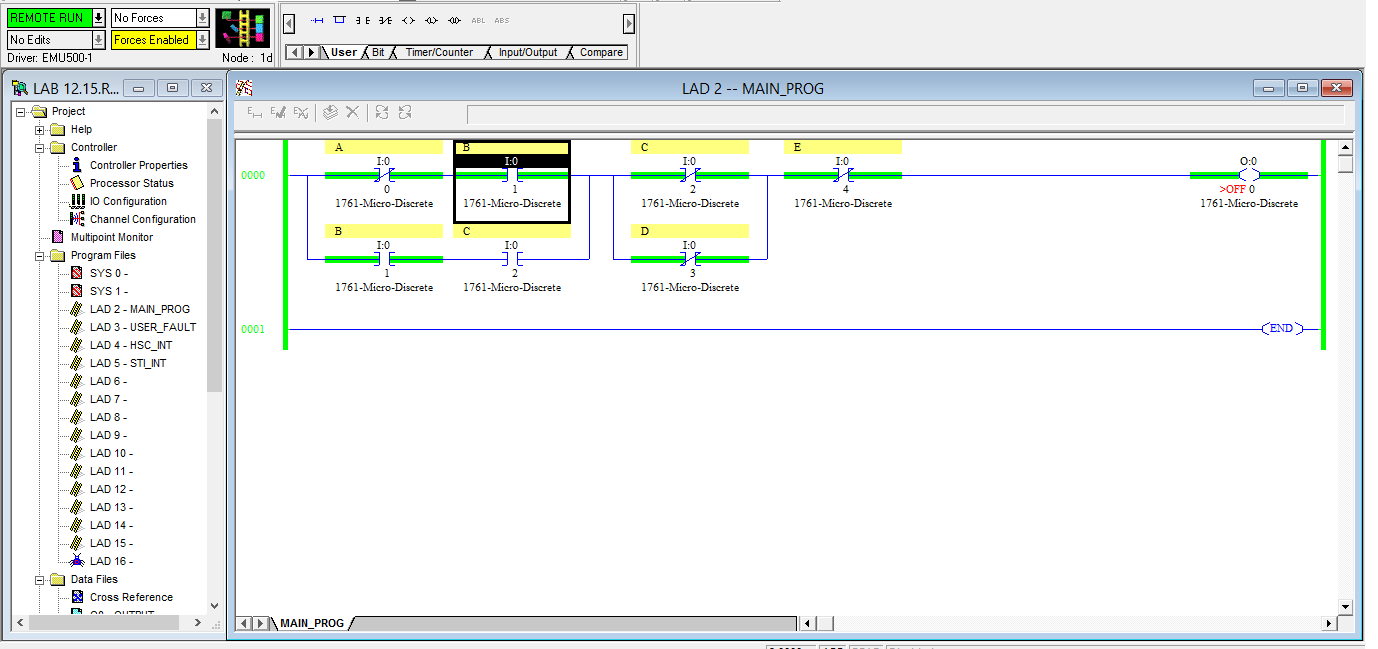
DI:-I:0.0/0-A DO:-O:0.0/0-O

I:0.0/1-B

I:0.0/2-C

I:0.0/3-D

I:0.0/4-E

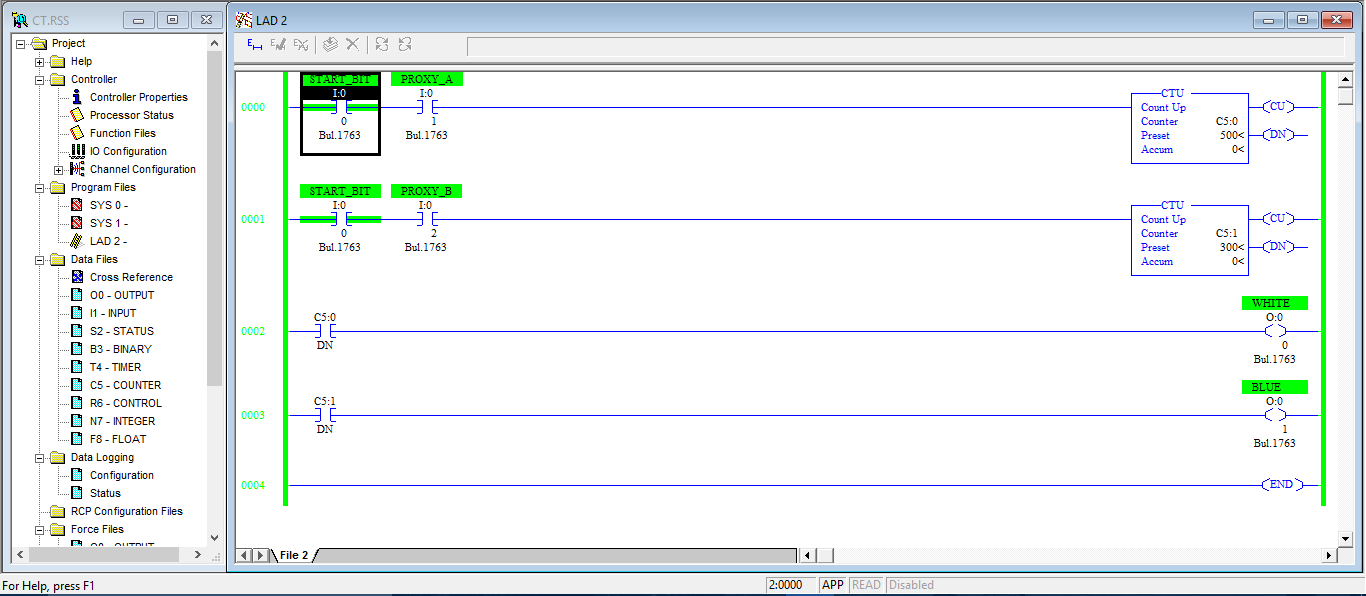


**3)Counter & Advanced Instruction**

(1)Count the number of products pass through the three conveyor.



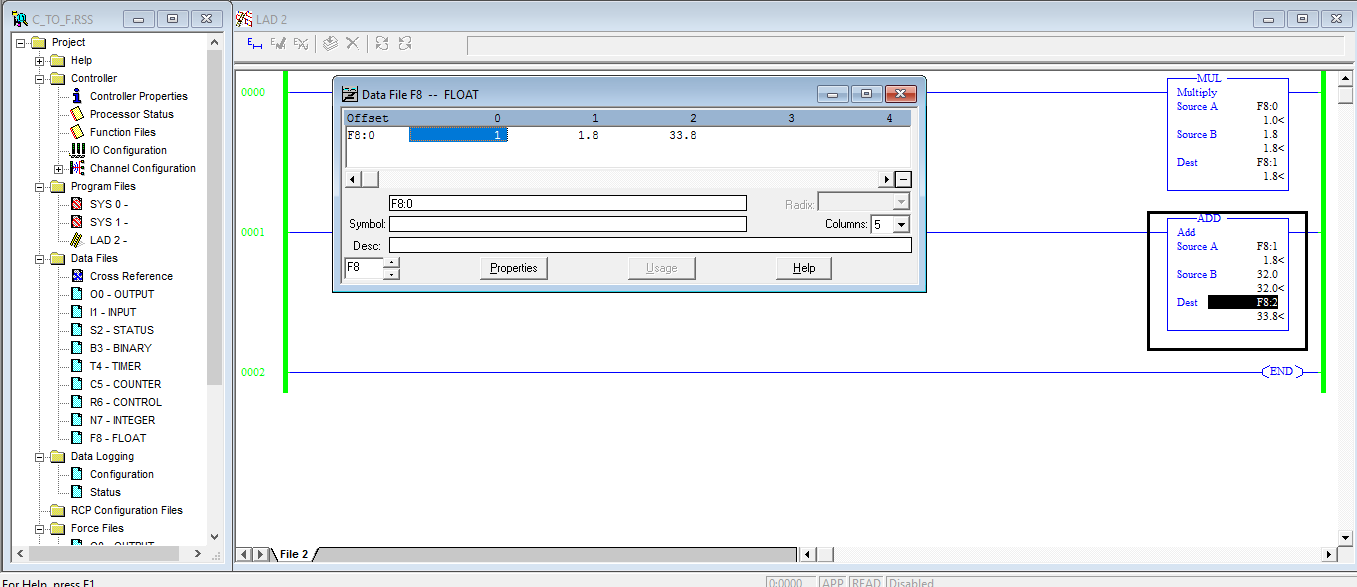
(2)An assembly line manufacture has two products A& B. Whenever 500 products of A are manufactured then white lamp ON & for 300 of B a blue lamp is ON.



**4)Arithmatic Instruction**

(1) Degree Farenheit to Degree Centigrate conversion.

F = (9/5)C + 32



**5)MOV Instruction**

(1)On a assembly line product A & B are drilled. When product A appears on assembly line its been detected by proximity sensor A and run drilling for 5s & if its detected product B the run Drilling for 10s.Draw ladder diagram for the above given sequence.

