Pseudocode

Group 2 Workshop-3

Variables =>

1. Red light = R

2. Solid-Green+Advance left Green light = LG

3. Solid-Green+ Advance left Amber light =LA

4. Solid-Green+ Advance left light off = G

5. Yellow/Amber light = Y

6. Interval (Light durations) = ‘n’ seconds

7. Car detection sensor = CS

8. Request to walk button = RW

“Down-count”

Start

1. Interval = ‘n’ seconds
2. If interval= 0 (end)
3. If interval >0 (Repeat step.1 until interval = 0)

End

“Interrupt”

Start

1)Interrupt happens

2) System turns off or starts from the previous step (Go to End)

End

“Car-Sensor”

Start

1. CS detects 5 or more vehicles.
2. Yes: Set interval = 10 seconds call “Down-count” (Interval = ‘10’Seconds)
3. No: Set interval = 78 seconds call “Down-count” (Interval =’78’ Seconds)

End

“Request-To-Walk”

Start

1)Pedestrian press ‘RW’.

a) Yes: Set interval =10 seconds call “Down-count” (Interval = ‘10’ seconds)

b) No: Set interval = 78 seconds call “Down-count (Interval =’78’ Seconds)

End

Start

1. The light is ‘LG’ interval =’15’Seconds.
2. Call “Down-count” (Interval=’15’seconds).
3. If there is an Interrupt?
4. Yes: Call “Interrupt” and go to End.
5. No: Go to Step.2.
6. Now, the light is ‘LA’ interval=’5’ Seconds.
7. Call “Down-count” (Interval=’5’ seconds).

b) Is there an Interrupt?

i) Yes: Call “Interrupt” and go to End.

ii)No: Go to Step.3.

3)Now, the light is ‘G’ interval = ‘45’Seconds.

a) Call “Down-count” (Interval=’45’Seconds).

b) Is there an Interrupt?

i) Yes: Call “Interrupt” and go to End.

ii)No: Go to Step.4.

4)Now, the light is ‘Y’ interval =’10’seconds.

a) Call “Down-count” (Interval=’10’seconds).

b) Is there an Interrupt?

i) Yes: Call “Interrupt” and go to End.

ii)No: Go to Step.5.

5)Now the light is ‘R’ interval=’78’seconds.

a) Call “Down-count” (Interval=’78’seconds).

b) If there is an Interrupt?

i) Yes: Call “Interrupt”.

ii)No: Go to End.

c) If the ‘RW’ pressed?

i) Yes: Call “Request-To-Walk”

ii)No: Go to End.

d) If the ‘CS’ detects 5 or more cars?

i) Yes: Call “Car-Sensor”.

ii) No: Go to End.

End

Test code

Start

1. The light is ‘LG’ with 10 seconds interval. (No interrupt happens Down-count completes, goes to next step)
2. The light is ‘LA’ with 5 seconds interval. (Interrupt happens goes to the End then system resumes from step.1 or turns off (End).
3. The light is ‘G’ with interval ’40’ seconds. (No interrupt Down-count completes goes to next step.)
4. The light is ‘Y’ with interval ‘10’ seconds. (No interrupt Down-count completes goes to next step.)
5. The light is ‘R’ with interval ‘68’ seconds. (‘RW’ is pressed interval becomes’10’ seconds, completes the Down-count and End) OR

(‘CS’ detects 5 or more cars interval becomes ‘10’ seconds completes the ‘Down-count’ and End)

End.