**Global constants: (Puneet)**

 Define 4 LED’s as follows:

Sound Alarm (Red Led), pin 13

Door lock/unlock (Yellow LED), pin 9

Privacy switch on/off (Orange Led), pin 6

SOS Distress Signal (Blue Led), pin 2

Variables:

Distance: 4 cm, Int “distance”

Sound: alarm, Int “Alarm”

Switch: Privacy, Int “Switch”

**Initialization code: (Puneet, Akashdeep)**

For the motion sensor to initialize the Motion Sensor, Alarm Led (pin 13), Door lock/unlock Led (pin 9), Privacy switch on/off Led (pin 6), SOS distress signal Led (pin 2)

**Main Loop Code: (Antonio, Akashdeep)**

Check the privacy switch

If the privacy switch is on then the sound alarm is active, motion sensor is active, SOS distress signal is active, door gets locked, 4cm distance is active.

If the privacy switch is off then the sound alarm is not active, motion sensor is not active, SOS distress signal is not active, door gets unlocked, 4cm distance is not active.

Check the Sound alarm

If the sound alarm is on then if an unauthorized person breaks in then the alarm will be triggered

If the sound alarm is off then if a unauthorized person breaks in then the alarm will not go off

Check the SOS Distress signal

If the SOS distress signal is on then the alarm gets triggered when somebody try’s to break in the room using the motion sensor

If the SOS distress signal is off then the alarm does not get triggered when somebody try’s to break in the room using the motion sensor

Check the locks is on then when an object enters the area of the motion sensor within 4cm, the door will unlock and let the user in.

Check the locks is off then when an object enters the area of the motion sensor within 4cm, the door will stay locked and not let the user in.