**PSEUDO CODE:**

**TRAINING PHASE:**

**PSEUDO CODE for ACTION EVENT DETECTION :**

start blob image extraction

if video NOT avi format

Print 'Incorrect File Name'

endif

if next.frame for input\_video

compare split frame image with background\_image

set r,g,b to R,G,B values of split frame image

set r1,g1,b1 to R,G,B values of background image

compare the pixel of corresponding points

if pixel comparison varies

mark the start point of blob\_image

endif

if pixel comparison NOT varies AND blob\_image marking started

mark the end point of blob\_image

endif

endif

end blob image extraction

In this module, the recorded video using Java Media Framework(JMF) is checked to be in the correct AVI format. Then, in the proper recorded video, the frames are split from the video for training. The background image without any person is recorded to extract the blob image from the splitted frame. The blob image is compared with the background image and the blob image is extracted.

**PSEUDO CODE for BUILDING THE BEHAVIOUR MODEL:**

start data serialization

if blob\_image is extracted

serialize the blob\_image

else

start blob image extraction

endif

end data serialization

Data Serialization refers to the process of converting an object into a format that can be stored(eg. a file format). So, the extracted blob image are used to be stored for anomaly detection. Hence these image objects are serialized in this module.

**DETECTION PHASE:**

**PSEUDO CODE for ACTION EVENT DETECTION:**

start blob image extraction

if video NOT avi format

Print 'Incorrect File Name'

endif

if next.frame for input\_video

compare split frame image with background\_image

set r,g,b to R,G,B values of split frame image

set r1,g1,b1 to R,G,B values of background image

compare the pixel of corresponding points

if pixel comparison varies

mark the start point of blob\_image

endif

if pixel comparison NOT varies AND blob\_image marking started

mark the end point of blob\_image

endif

endif

end blob image extraction

This module is similar to Action Event Detection module of Training Phase. In this module, the recorded video using Java Media Framework(JMF) is checked to be in the correct avi format. Then, in the proper recorded video, the frames are split from the video for training. The background image without any person is recorded to extract the blob image from the splitted frame. The blob image is compared with the background image and the blob image is extracted. These blob images are compared with the pre stored blob images in the next module.

**PSEUDO CODE for COMPARE WITH BEHAVIOUR MODEL:**

start compare with behaviour model

if next.frame for input\_video

extract blob\_image for each splitted frame

initialize checksquarewidth to 10

compare each pixel of checksquarewidth with corresponding pixels

if different\_pixels < (checksquarewidth \* checksquarewidth) /2

return TRUE

else

return FALSE

endif

repeat for all squares of the blob image

endif

end compare with behaviour model

The extracted blob images are compared with the pre stored blob images. The comparison is made by constructing an imaginary square of width 10. The pixels in this imaginary square are compared with the corresponding pixels of the pre stored blob image. The pixels that differs are counted and if the count is lesser than the half of the square of the width of the imaginary square means, then true value is returned. Similar comparisons are made for consecutive squares and the above process is repeated for all frames of the video.

**PSEUDO CODE for SIGNAL GENERATION:**

start signal generation

if blob\_image mismatch

return RED SIGNAL

else

return GREEN SIGNAL

endif

end signal generation

If an anomaly is detected, then the detection phase generates an RED signal to alert the administrator. If no anomaly is detected, then the systems shows that only authorized person is entered and there will be no change in the GREEN signal.