CHAPTER V
CONCLUSIONS

5.1 Conclusions

Markerless motion capture Kinect V1 can be a useful motion capture tool for OWAS posture evaluation. Besides the portable tool, low price, can be done with or without light, the other advantage of markerless motion capture can be used for digital human models (DHMs) to analyze workplaces and worker postures virtually. From the evaluations, it is concluded that the results strengthen previous research that used Kinect V1 as a tool for ergonomic assessment.

Overall, 11 out of 14 full body of OWAS postures can be captured accurately for assessments. There are three primary sources of limitations from this final project. Optical occlusions cause unusable motion or jittery capture data while rotate or tilt sideways, bent and twisted, and kneel on one or both knees. These causes optical occlusions with the limbs due to the Kinect sensor missing the line of sight.

5.2 Recommendations

Microsoft has developed the Kinect with the second generation of Kinect hardware (V2). This final project can be updated, and the results will be re-evaluated for their validity using the new generation of the hardware, which is the Kinect.

To overcome the optical occlusions or lost tracking problem, can be done by increasing the number of recording sensors (multiple Kinect) to cover the lack of depth sensor sight limits.