**Project Management**

* **YouTube URL:** https://www.youtube.com/watch?v=dTcyoZW8bAU
* **Project management report:**

·        We have not used scrum do tool to record the tasks as project duration was less than a month. Instead used github to for code integration and as a central repository. Each member would clone the project, make necessary changes to the code and push the code to central repository. In first increment, we have collected data using sensor tag for four human gestures namely right-to-left, left-to-right, top-to-bottom, bottom-to-top. We collected 20 different samples of data for each gesture .In second phase, we trained the four human gestures from data collected using HMM model and k-means clustering algorithm. In third phase, we made changes to existing open source snake game such that touch event game is converted into sensor based game. In final phase ,we included display human activities that were recorded while playing the game. To enhance better understanding of the user, we used pie charts and graph charts to display activity results to the user. Included calorie meter which calculates number of calories burnt by playing the game.

* **Final project evaluation**:

We have modified our project plan after 2nd increment as recognizing various bowling actions with collected sensor data was not feasible. So we have implemented sensor based snake game. We have done our best to implement all the functionalities mentioned in our project plan. But unfortunately we did not implement Google maps feature in our app due to lack of time. We have implemented  model-view-controller architecture in Android project. We are satisfied with both our database design and presentation layer (UI design) of android app. Agile process model helped us to track the status of project like where we are after each increment and what approach could be followed in next increment for better delivery. If the requirements had changed say after second increment, it could have been much challenging. We adhered to our project plan schedule and submitted reports on time. We have divided tasks based on increment basis rather than dividing each task involving in each and every member. For example, if one does documentation for this increment then that person would do coding in next increment. It does resemble our planned structure because at end of the project each member is good at every task. Initially we have faced few problems, but later each member is able to cope up with other. If it would have been a real time project then we would had our project plan crystal clear in our minds before starting the project. We would have analyzed the features mentioned in plan would be completed within stipulated time or not. We would have maintained mitigation plan if something goes wrong. We would strongly recommend to focus more on plan preparation and analyze the features mentioned in plan could be completed within time or not.

**Project Evaluation:**

Following is the confusion matrix for the 20 samples of data collected. We got accuracy of around 87% and the highest accuracy is for up and down gestures.



