

# **Camera based Invisible Mouse**

Taking cues from the comments from the mentors, we have modified our abstract.

## **OBJECTIVE**

- Our objective is to build a camera based mouse by detecting the movement of the hand.
- Two possible implementations of the above idea are :
  1. Using IR source to illuminate the hand of the user and detect the movement using IR camera.
  2. Or simply use a normal camera for hand movement detection .These two ways were suggested by Kamal Galrani.
- The IR source (if IR source is used) will be attached on the side of the laptop and the camera will be attached on the back of the laptop.
- Cursor movement will be controlled by movement of hand of the user on the desk or a flat surface.
- User will be able to left click and right click using index and middle finger respectively.

## **ADDITIONAL FEATURES (if time permits)**

- Will try to implement scrolling functionality by simultaneous movement of index and middle finger.

## **COMPONENTS REQUIRED**

- IR source (if used)
- Camera

## **WEEKLY ACTION PLAN**

- **Week 1:** Gaining basic knowledge of OpenCV and VisualBasic.
- **Week 2-3:** Writing the required code and implementing the mouse function.
- **Week 4:** Calibrating the mouse with software and developing sensitivity of the mouse.
- **Week 5:** Using VisualBasic to co-ordinate with Windows system to implement the required interface.
- **Week 5:** Finishing of the project and implementation of additional feature .