8.0 SYSTEM EVALUATION

Before the system is delivered to the end user, evaluation is an important phase and the ultimate phase of developing a system. It is related to user environment, attitudes, information priorities and several other concerns that are to be considered carefully before effectiveness can be concluded. Evaluation is a process that occurs continuously, drawing on a variety of sources and information at all phases of the system approaches. In this section, I will include the evaluation of the system to identify its strengths and limitations of the system. As suggestion to further improvement of this system, the possibility to enhance the system also explored.

8.1 System Strength

Several strengths of this tool are as below:

- **Easy to use**
  User needs only to read the program manual several times to familiarize themselves with the keyboard and mouse shortcuts and the rest of usage can be learned easily through common use.

- **Performance**
  The usage of OBB will not put a lot of burden on the collision detection processing requirements, thus moderately powerful machines are only needed to run this tool.

- **More memory efficient**
  The usage of OBB to encapsulate the actual object for performing collision detection reduce the memory footprint of this tool, as compared to actually use the object itself to perform collision detection.

- **Balance between accuracy and performance**
  Optimum balance of accuracy versus performance is achieved through using OBB to represent the objects.

8.2 System Weaknesses and Limitations

Due to my own time constraint and programming skills, there are some weaknesses in FaultPoints graphical password system. The weaknesses or limitations are elaborated as below:

- **Collision detection is not implemented fully**
Whenever two objects intersect each other, no reaction according to physics law will be observed. Only the intersection parts will be highlighted through changing the color.

- **Continuous random and fluid motion**
  Objects on the screen will not be moving on their own and have to be moved or rotated manually using certain keys on the keyboard.

### 8.3 Future Enhancements and Expansion

Due to the time constraint, not all the features can be incorporated into the system. Future enhancements can be done to make the system more advanced and realistic. A few are listed below.

- **Implement physics law in the tool**
  Currently, no bouncing off or still motions after two objects collide are observed. These reactions can be incorporated in a future version of this tool.

- **Random motion for each object**
  Manual movement and rotation are only possible at this stage. In the future, an external library can be used to move these objects on its own in random and fluid motion.