Question 1

1. CH6-ACTIVITY

In Activity 6.4 we asked you to compare the experience of playing the game of Snake on a PC with playing on a cell phone. For this assignment, we want you to consider the pros and cons of playing the same game using different interfaces. Select three interfaces, other than the GUI and mobile ones (e.g. tangible, wearable, and shareable) and describe how the game could be redesigned for each of these, taking into account the user group being targeted. For example, the tangible game could be designed for young children, the wearable interface for young adults, and the shareable interface for elderly people.

(a) Go through the research and design issues for each interface and consider whether they are relevant for the game setting and what issues they raise. For the wearable interface, issues to do with comfort and hygiene are important when designing the game.

(b) Describe a hypothetical scenario of how the game would be played for each of the three interfaces.

(c) Consider specific design issues that will need to be addressed. For example, for the shareable surface would it be best to have a tabletop or a wall-based surface? How will the users interact with the snake for each of the different interfaces; by using a pen, fingertips, or other input device? Is it best to have a representation of a snake for each player or one they take turns to play with? If multiple snakes are used, what will happen if one person tries to move another person’s snake? Would you add any other rules? And so on.

(d) Compare the pros and cons of designing the Snake game using the three different interfaces with respect to how it is played on the cell phone and the PC.

GUIDELINES:
The research and design issues for each of the interfaces you choose to examine playing the game of Snake are likely to be different but some may overlap. For example, a wearable game might entail a group of people playing together as a Snake (based on the conga dance), trying to avoid hidden obstacles in the physical environment. The game could use RFID, GPS or Bluetooth to track the human players in relation to the virtual objects overlaid in the physical world. Each player would don a wearable jacket or tunic that was embedded with sensors and LEDs (that could light up depending on whether they hit an obstacle).

The tunics would need to be easy to put on over existing clothing and remove without requiring
too many parts to be attached together. Another concern would be how do the players know when they have scored points - what kinds of real-time feedback would be appropriate? As well as considering the use of LEDs to show immediate ‘hits’ how might vibro-tactile feedback be used to let others further back in the snake know what is coming up next? How will the players understand their role in the game if it is designed as a collaborative game? What rules would you include? How would you enable the players to communicate with one another?

Compared to a single user game, on a PC or cell phone, there is a lot of potential of this kind of first person, role-playing physically embedded simulation for facilitating new forms of learning and reflection in a group setting plus engendering much fun.

**Deliverable:**

The completed assignment, covering all the requested material as a .pdf file