**PATUAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY**

**COURSE CODE CCE-112**

**SUBMITTED TO:**

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Assignment: Lab Problem 13

Assignment title: Asteroid Breaker

#### 1) How does the wrap-around code work?

The wrap-around code works because we know the edge’s position of x and y axis. Based on this information if we use four conditions for four different edges with a forever loop, we can get the wrap-around workflow. For this to happen, inside a forever loop, first conditions like, if the position of our object is greater than a certain value, it’ll be transported to the other edges almost instantly.

#### 2) Why does the Energy Blast sprite have an I am a clone variable?

Without ‘I am a clone’ variable, the clones will also create their own clones. Eventually it’ll make the code to be more heavy, and the patent clone will also be deleted each time we hit. To avoid this we created this variable to detect the parent spirit with a condition.

#### 3) What prevents the Asteroid clone from breaking into exponentially more pieces forever?

To prevent the asteroids to clone exponentially we used a variable called, ‘hits’. In the clone we set a condition where, asteroids will break into more pieces if it touches the Energy ball. Then, this asteroids will shrink in size and create two more clones. Where hit value will increase by one time for each clone. After that condition we used a nested condition to check the value of variable ‘hit’. If it is equal to four, then we delete the clone, In this way we make sure that the clone doesn’t clone itself exponentially.

#### 4) How does the Explosion sprite’s code make the spaceship look like it’s exploding?

To make the explosion sprite’s code look like the spaceship is exploding, we will first make the sprit hidden at the time of startup. Later when the spaceship will be exploded, we’ll announce it with a broadcast. Then we’ll hide the spaceship and in the same time, the exploding spirit will go to the point of spaceship. With a loop, we’ll change the costume repeatedly, and thus it’ll look like the spaceship is exploding.