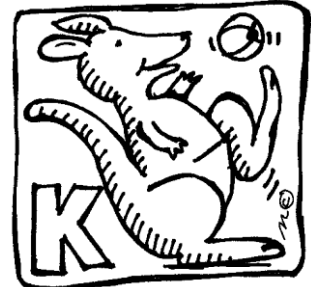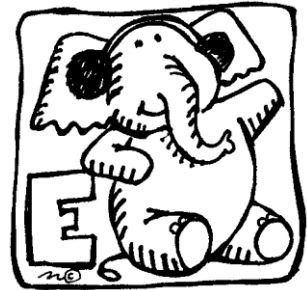# Queue Questions

1. Create a queue that contains the letters of your name. Add your last name or repeat the letters until you have enqueued 10 letters. You will need to enqueue each letter separately. Print the queue on the screen.

2. Reverse the order of the queue using a stack. Print the queue on the screen.

3. Print every second element of the queue on the screen.

4. Find the maximum of the queue.

Starter Code

```java
public class QueueQuestions {
    public static void main(String args[]) {
        new QueueQuestions();
    }
    public QueueQuestions() {
        //To do: Make a new queue, add 10 letters from your name to it.

        //Print every item in the queue, using a loop
        System.out.println("1. Print every item in the queue using a loop:");

        //To do: Put the 10 letters from your name back in the queue

        //Reverse the order of the queue using a stack
        System.out.println("Reverse order using a stack:");


        //To do: Put the 10 letters from your name back in the queue

        //Print every second item in the queue on the screen
        System.out.println("3. Print every second item in the queue:");

        //To do: Put the 10 letters from your name back in the queue

        //Find the maximum of the queue
        System.out.println("4. Find the maximum:");

    }
}
```

The Queue Class (for Chars)

```java
public class Queue
{
    private char data[] = new char [50];
    int count;
    int head;
    public Queue ()
    {
        count = 0;
        head = 0;
    }


    public void enqueue (char value)
    {
        int tail = (head + count) % data.length;
        data [tail] = value;
        count++;
    }


    public char dequeue ()
    {
        char temp = data [head];
        count--;
        head = (head + 1) % data.length;
        return temp;
    }


    public char peek ()
    {
        return data [head];
    }


    public int size ()
    {
        return count;
    }


    public boolean isEmpty ()
    {
        return (count == 0);
    }


    public String toString ()
    {
        //this is NOT an official Queue method
        //it is useful to see what is in your Queue
        int size = count;
        String hold = "";
        for (int i = 0 ; i < size ; i++)
        {
            char temp = dequeue ();
            hold += temp + " ";
            enqueue (temp);
        }
        return hold;
    }
}
```