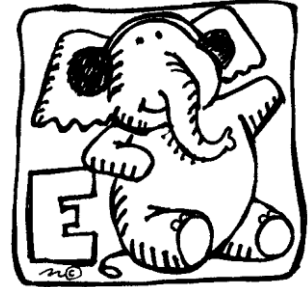


Queue Questions

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. (print a title first to explain which question you are answering).
2. Reverse the order of the queue using a stack. Print the queue on the screen. (print a title first to explain which question you are answering).
3. Print every second element of the queue on the screen. (print a title first to explain which question you are answering).



The XML:

```
<?xml version="1.0" encoding="utf-8" ?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_gravity="center_horizontal"
    android:orientation="vertical">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Queue Questions"
        android:textSize="20dp"
        android:layout_gravity="center_horizontal"
    />

    <TextView
        android:id="@+id/TextArea"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:layout_margin="20dp"
        android:background="#fcffcf"
        android:inputType="textMultiLine"
        android:maxLines="15"
        android:minLines="15"
        android:padding="10dp"
        android:scrollbars="vertical"
        android:textSize="18dp" />

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="Q1"
            android:text="1. In Order"
            android:textSize="14dp" />

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="Q2"
            android:text="2. Reverse"
            android:textSize="14dp" />

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="Q3"
            android:text="3. Every Second"
            android:textSize="14dp" />

    </LinearLayout>

</LinearLayout>
```



```

        android:textSize="14dp" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="Q3"
        android:text="3. Every second"
        android:textSize="14dp" />
</LinearLayout>
</LinearLayout>

```

The Queue Class

```

public class Queue {
    private Object data[] = new Object [50];
    int count;
    int head;
    public Queue () {
        count = 0;
        head = 0;
    }
    public void enqueue (Object value) {
        int tail = (head + count) % data.length;
        data [tail] = value;
        count++;
    }
    public Object dequeue () {
        Object temp = data [head];
        count--;
        head = (head + 1) % data.length;
        return temp;
    }
    public Object 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++) {
            Object temp = dequeue ();
            hold += temp + " ";
            enqueue (temp);
        }
        return hold;
    }
}

```