

*Note: Finish at first two activities by 4PM 15-sep-14.*

1. Consider having a poll for a student body position at IIIT Vadodara. You need to create two classes that simulate the polling. Let us name the classes as PollSimulator and PollDB.
2. You need to implement the class **PollDB** such that code below runs correctly as expected.

```
import java.util.Random;

public class PollSimulator {

    public static void main(String[] args) {

        String[] candNames = new String[5];
        candNames[0] = "Deep Goyal";
        candNames[1] = "Sneha Mohan";
        candNames[2] = "Praveen Shah";
        candNames[3] = "Akshay Singh";
        candNames[4] = "Somin Majumdar";

        PollDB poll_db = new PollDB( candNames );

        int nc = poll_db.getNumberOfCandidates();
        Random rand = new Random(55);
        for( int i = 1; i <=50; i++ ) {
            int x = 1 + rand.nextInt(nc);
            poll_db.voteTo( x );
        } //Assume that candidates are identified as 1 through 5

        //Report the election result
        for(int i = 1; i <= poll_db.getNumberOfCandidates(); i++ ) {
            System.out.println(poll_db.getCandidateName(i)
                               + ": " + poll_db.votesCount(i));
        }
        System.out.println("Winner: " + poll_db.getWinner());
    }

}
```

3. Modify **PollSimulator** class such that, it takes vote cast from the console (in a finite loop) rather than random generated casts like the one happening above.
4. Also, modify PollSimulator such that before producing the election result, it prompts for the password, and if password entered is correct, it produces the result. If password is wrong, it should prompt again (total three chance only). Also correct password should be encapsulated in PollDB class as field, not in code or PollSimulator any where.
5. Now suppose, we want to use the PollDB class for simulating poll for 5 positions. What strategy would you suggest for this? I would like you to explore both possibilities, without modifying PollDB, and creating another version of PollDB with enhanced functionality.