

```

1 public interface SentenceBuilder{
2     void buildSubject();
3     void buildVerb();
4     void buildObject();
5     void extendSentence();
6     void whenSentence();
7 }

```

Figure 1: Source code for ../src/SentenceBuilder.java

```

1 public class PastSentenceBuilder implements SentenceBuilder{
2     private String subject, verb, object,sentence;
3
4     public PastSentenceBuilder(String subject, String verb, String object) {
5         super();
6         this.subject = subject;
7         this.verb = verb;
8         this.object = object;
9         reset();
10    }
11
12    @Override
13    public void buildSubject() {
14        sentence += "the " + subject + " ";
15    }
16
17    @Override
18    public void buildVerb() {
19        sentence += verb + "ed ";
20    }
21
22    @Override
23    public void buildObject() {
24        sentence += object;
25    }
26
27    @Override
28    public void extendSentence() {
29        sentence += "Yesterday, ";
30    }
31    @Override
32    public void whenSentence() {
33        sentence += "When did ";
34    }
35    public String getResult() {
36        return sentence;
37    }
38    public void reset() {
39        sentence = "";
40    }
41 }

```

Figure 2: Source code for ../src/PastSentenceBuilder.java

```

1 public class PresentSentenceBuilder implements SentenceBuilder{
2     private String subject, verb, object, sentence;
3
4     public PresentSentenceBuilder(String subject, String verb, String object) {
5         super();
6         this.subject = subject;
7         this.verb = verb;
8         this.object = object;
9         reset();
10    }
11
12    @Override
13    public void buildSubject() {
14        sentence += "the " + subject + " ";
15    }
16    @Override
17    public void buildVerb() {
18        sentence += verb + "s ";
19    }
20    @Override
21    public void buildObject() {
22        sentence += object+ " ";
23    }
24    @Override
25    public void extendSentence() {
26        sentence += "Everyday, ";
27    }
28    @Override
29    public void whenSentence() {
30        sentence += "When does ";
31    }
32    public String getResult() {
33        return sentence;
34    }
35    public void reset() {
36        sentence = "";
37    }
38 }

```

Figure 3: Source code for ../src/PresentSentenceBuilder.java

```

1 public class SimpleSentaceDirector (
2     private SentenceBuilder builder;
3
4     public SimpleSentaceDirector(SentenceBuilder builder) {
5         this.builder = builder;
6     }
7     public void Counsruct () {
8         builder.extendSentence();
9         builder.buildSubject();
10        builder.buildVerb();
11        builder.buildObject();
12    }
13
14 }

```

Figure 4: Source code for ../src/SimpleSentaceDirector.java

```

1 public class WhenSentaceDirector (
2     private SentenceBuilder builder;
3
4     public WhenSentaceDirector(SentenceBuilder builder) {
5         this.builder = builder;
6     }
7     public void Counsruct () {
8         builder.whenSentence();
9         builder.buildSubject();
10        builder.buildVerb();
11        builder.buildObject();
12    }
13
14 }

```

Figure 5: Source code for ../src/WhenSentaceDirector.java

```

1  import java.util.Random;
2
3  public class Main {
4      public static void main(String[] args) {
5          Random rand = new Random();
6          String[] subjects =
7              {"cow", "chicken", "boy", "girl", "baker", "man"};
8          String[] verbs =
9              {"walk", "attck", "play", "answer", "cook", "park"};
10         String[] objects =
11             {"on the grass", "the puppy", "with the ball", "the question", "the meat", "the car"};
12
13
14         PresentSentenceBuilder curPresentBuilder = new PresentSentenceBuilder(
15             subjects[rand.nextInt(subjects.length)],
16             verbs[rand.nextInt(verbs.length)],
17             objects[rand.nextInt(objects.length)]
18         );
19         PastSentenceBuilder curPastBuilder = new PastSentenceBuilder(
20             subjects[rand.nextInt(subjects.length)],
21             verbs[rand.nextInt(verbs.length)],
22             objects[rand.nextInt(objects.length)]
23         );
24
25
26         (new SimpleSentaceDirector(curPresentBuilder)).Counsruct();
27         System.out.println(curPresentBuilder.getResult());
28         (new SimpleSentaceDirector(curPastBuilder)).Counsruct();
29         System.out.println(curPastBuilder.getResult());
30
31         curPresentBuilder.reset();
32         curPastBuilder.reset();
33         (new WhenSentaceDirector(curPresentBuilder)).Counsruct();
34         System.out.println(curPresentBuilder.getResult());
35         (new WhenSentaceDirector(curPastBuilder)).Counsruct();
36         System.out.println(curPastBuilder.getResult());
37
38
39     }
40 }

```

Figure 6: Source code for ../src/Main.java