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**Semester:** 6  
**Section:** G

## Assignment 3

### TestQuestion.java

```
TestQuestion.java 6, U X
TestQuestion.java > LongAnswer > readQuestion()
1  import java.util.Scanner;
2
3  abstract class TestQuestion{
4      String question;
5      abstract void readQuestion();
6      abstract void toString();
7  }
8
9  class ShortAnswer extends TestQuestion{
10     int numLines = 1;
11     void readQuestion(){
12         Scanner sc= new Scanner(System.in);
13         System.out.println("Enter the question: ");
14         question = sc.nextLine();
15         numLines = 1;
16     }
17     void toString(){
18         System.out.println("Question: " + question);
19     }
20 }
21
22 class LongAnswer extends TestQuestion{
23     int numLines;
24     void readQuestion(){
25         Scanner sc= new Scanner(System.in);
26         System.out.println("Enter the question: ");
27         question = sc.nextLine();
28         Scanner sc1 = new Scanner(System.in);
29         System.out.println("Enter the number of Lines: ");
30         numLines = sc1.nextInt();
31     }
32 }
```

TestQuestion.java 6, U x

TestQuestion.java > LongAnswer > readQuestion()

```
32     void toString(){
33         System.out.println("Question: " + question);
34         System.out.println("Number of Lines: " + numLines);
35     }
36 }
37
38 class MCQ extends TestQuestion{
39     int numOfChoices;
40     String[] choices = new String[4];
41     void readQuestion(){
42         Scanner sc= new Scanner(System.in);
43         System.out.println("Enter the question: ");
44         question = sc.nextLine();
45         Scanner sc1 = new Scanner(System.in);
46         System.out.println("Enter the number of choices: ");
47         numOfChoices = sc1.nextInt();
48         Scanner sc3 = new Scanner(System.in);
49         System.out.println("Please enter mcq choices: ");
50         for (int i = 0; i < numOfChoices; i++) {
51             choices[i] = sc3.nextLine();
52         }
53     }
54     void toString(){
55         System.out.println("Question: " + question);
56         System.out.println("Number of Choices: " + numOfChoices);
57         for (int i = 0; i < numOfChoices; i++) {
58             System.out.println("Choice " + (i+1) + ": " + choices[i]);
59         }
60     }
61 }
```

## TQManager.java

```
TQManager.java 1, U x
TQManager.java > TQManager > main(String[])
1  import java.util.Scanner;
2
3  public class TQManager {
4      static TestQuestion[] questions = new TestQuestion[20];
5      int numOfQuestions = 0;
6      Run | Debug
7      public static void main(String[] args){
8          Scanner sc = new Scanner(System.in);
9          System.out.println("Enter the number of questions: ");
10         int numOfQuestions = sc.nextInt();
11         for (int i = 0; i < numOfQuestions; i++) {
12             System.out.println("Enter the type of question (Enter 1 for Short Answer, Enter 2 for
13             int type = sc.nextInt();
14             if (type == 1 ) {
15                 questions[i] = new ShortAnswer();
16                 questions[i].readQuestion();
17                 questions[i].toString();
18             } else if (type == 2) {
19                 questions[i] = new LongAnswer();
20                 questions[i].readQuestion();
21                 questions[i].toString();
22             } else if (type == 3) {
23                 questions[i] = new MCQ();
24                 questions[i].readQuestion();
25                 questions[i].toString();
26             }
27         }
28     }
29 }
```

## Output

```
Enter the number of questions:
5
Enter the type of question (Enter 1 for Short Answer, Enter 2 for Long Answer and Enter 3 for MCQ):
1
Enter the question:
What is Java?
Question: What is Java?
Enter the type of question (Enter 1 for Short Answer, Enter 2 for Long Answer and Enter 3 for MCQ):
2
Enter the question:
Explain advantages of Java.
Enter the number of Lines:
8
Question: Explain advantages of Java.
Number of Lines: 8
Enter the type of question (Enter 1 for Short Answer, Enter 2 for Long Answer and Enter 3 for MCQ):
3
Enter the question:
Is Java a object oriented Language?
Enter the number of choices:
2
Please enter mcq choices:
yes
no
Question: Is Java a object oriented Language?
Number of Choices: 2
Choice 1: yes
Choice 2: no
Enter the type of question (Enter 1 for Short Answer, Enter 2 for Long Answer and Enter 3 for MCQ):
1
Enter the question:
why is Java Popular?
Question: why is Java Popular?
Enter the type of question (Enter 1 for Short Answer, Enter 2 for Long Answer and Enter 3 for MCQ):
2
Enter the question:
What is disadvantages of C?
Enter the number of Lines:
10
Question: What is disadvantages of C?
Number of Lines: 10
```