

## E:\quiz.java

```
1  import java.util.*;
2
3  public class QuizGame {
4
5      private static Map<String, Quiz> quizzes = new HashMap<>();
6
7      public static void main(String[] args) {
8          Scanner scanner = new Scanner(System.in);
9          while (true) {
10             System.out.println("Enter a command: (create, take, view, list, exit)");
11             String command = scanner.nextLine();
12             if (command.equals("create")) {
13                 createQuiz(scanner);
14             } else if (command.equals("take")) {
15                 takeQuiz(scanner);
16             } else if (command.equals("view")) {
17                 viewQuiz(scanner);
18             } else if (command.equals("list")) {
19                 listQuizzes();
20             } else if (command.equals("exit")) {
21                 break;
22             } else {
23                 System.out.println("Invalid command.");
24             }
25         }
26     }
27
28     private static void createQuiz(Scanner scanner) {
29         System.out.println("Enter the name of the quiz:");
30         String quizName = scanner.nextLine();
31         Quiz quiz = new Quiz(quizName);
32         System.out.println("Enter the number of questions:");
33         int numQuestions = Integer.parseInt(scanner.nextLine());
34         for (int i = 0; i < numQuestions; i++) {
35             System.out.println("Enter the question:");
36             String question = scanner.nextLine();
37             System.out.println("Enter the number of choices:");
38             int numChoices = Integer.parseInt(scanner.nextLine());
39             List<String> choices = new ArrayList<>();
40             for (int j = 0; j < numChoices; j++) {
41                 System.out.println("Enter choice " + (j+1) + ":");
42                 String choice = scanner.nextLine();
43                 choices.add(choice);
44             }
45             System.out.println("Enter the index of the correct choice:");
46             int correctChoice = Integer.parseInt(scanner.nextLine()) - 1;
47             quiz.addQuestion(new Question(question, choices, correctChoice));
48         }
49         quizzes.put(quizName, quiz);
50         System.out.println("Quiz created.");
51     }
52
53     private static void takeQuiz(Scanner scanner) {
54         System.out.println("Enter the name of the quiz:");
```

```

55     String quizName = scanner.nextLine();
56     Quiz quiz = quizzes.get(quizName);
57     if (quiz == null) {
58         System.out.println("Quiz not found.");
59         return;
60     }
61     int score = 0;
62     for (int i = 0; i < quiz.getNumQuestions(); i++) {
63         Question question = quiz.getQuestion(i);
64         System.out.println("Question " + (i+1) + ": " + question.getQuestion());
65         List<String> choices = question.getChoices();
66         for (int j = 0; j < choices.size(); j++) {
67             System.out.println((j+1) + ": " + choices.get(j));
68         }
69         System.out.println("Enter your answer:");
70         int userAnswer = Integer.parseInt(scanner.nextLine()) - 1;
71         if (userAnswer == question.getCorrectChoice()) {
72             System.out.println("Correct!");
73             score++;
74         } else {
75             System.out.println("Incorrect. The correct answer is " +
76 (question.getCorrectChoice()+1) + ".");
77         }
78     }
79     System.out.println("Your score is " + score + " out of " + quiz.getNumQuestions() + ".");
80 }
81
82 private static void viewQuiz(Scanner scanner) {
83     System.out.println("Enter the name of the quiz:");
84     String quizName = scanner.nextLine();
85     Quiz quiz = quizzes.get(quizName);
86     if (quiz == null) {
87         System.out.println("Quiz not found.");
88         return;
89     }
90     System.out.println("Quiz: " + quiz.getName());
91     for (int i = 0; i < quiz.getNumQuestions(); i++) {
92         Question question = quiz.getQuestion(i);
93         System.out.println("Question " + (i+1) + ": " + question.getQuestion());
94         List<String> choices = question.getChoices();
95         for (int j = 0; j < choices.size(); j++) {
96             System.out.println((j+1) + ": " + choices.get(j));
97         }
98         System.out.println("Answer: " + (question.getCorrectChoice()+1));
99     }
100 }
101
102 private static void listQuizzes() {
103     System.out.println("Quizzes:");
104     for (String quizName : quizzes.keySet()) {
105         System.out.println("- " + quizName);
106     }
107 }
108
109 class Quiz {
110     private String name;

```

```
110 private List<Question> questions = new ArrayList<>();
111
112 public Quiz(String name) {
113     this.name = name;
114 }
115
116 public String getName() {
117     return name;
118 }
119
120 public void addQuestion(Question question) {
121     questions.add(question);
122 }
123
124 public Question getQuestion(int index) {
125     return questions.get(index);
126 }
127
128 public int getNumQuestions() {
129     return questions.size();
130 }
131 }
132 class Question {
133     private String question;
134     private List<String> choices;
135     private int correctChoice;
136
137     public Question(String question, List<String> choices, int correctChoice) {
138         this.question = question;
139         this.choices = choices;
140         this.correctChoice = correctChoice;
141     }
142
143     public String getQuestion() {
144         return question;
145     }
146
147     public List<String> getChoices() {
148         return choices;
149     }
150
151     public int getCorrectChoice() {
152         return correctChoice;
153     }
154
155 }
```