Write a Java program to create a class called "Course" with attributes for course name, instructor, and credits. Create a subclass "OnlineCourse" that adds attributes for platform and duration. Implement methods to display course details and check if the course is eligible for a certificate based on duration.

Sample Solution:

Java Code:

Course.java

```
// Define the Course class
public class Course {
    // Attributes for the course name, instructor, and credits
    private String courseName;
    private String instructor;
    private int credits;

    // Constructor to initialize the Course object
    public Course(String courseName, String instructor, int credits) {
        this.courseName = courseName;
        this.instructor = instructor;
        this.credits = credits;
    }

    // Method to display course details
    public void displayCourseDetails() {
        System.out.println("Course Name: " + courseName);
        System.out.println("Instructor: " + instructor);
        System.out.println("Credits: " + credits);
    }

    // Getter for course name
    public String getCourseName() {
        return courseName;
    }

    // Getter for instructor
    public String getInstructor() {
        return instructor;
    }
```

```
        // Getter for credits
        public int getCredits() {
            return credits;
        }
    }
```

Explanat

Course C

- Attril
- Cons
- displ
- Gett

OnlineCo

```
    // Define the OnlineCourse subclass that extends the Course class
    class OnlineCourse extends Course {
        // Additional attributes for the platform and duration
        private String platform;
        private int duration; // duration in hours

        // Constructor to initialize the OnlineCourse object
        public OnlineCourse(String courseName, String instructor, int credits,
            super(courseName, instructor, credits); // Call the superclass cons
            this.platform = platform;
            this.duration = duration;
        }

        // Method to display course details, including platform and duration
        @Override
        public void displayCourseDetails() {
            super.displayCourseDetails(); // Call the superclass method to disp
            System.out.println("Platform: " + platform);
            System.out.println("Duration: " + duration + " hours");
        }

        // Method to check if the course is eligible for a certificate based or
```

```
        public boolean isEligibleForCertificate() {
            // Assume that a course is eligible for a certificate if its durati
            return duration >= 10;
        }

        // Getter for platform
        public String getPlatform() {
            return platform;
        }

        // Getter for duration
        public int getDuration() {
            return duration;
        }
    }
```

Explanation:

OnlineCourse Class:

- Extends Course.
- Additional Attributes: platform and duration.
- Constructor: Initializes the attributes, calling the superclass constructor for the common attributes.
- displayCourseDetails(): Overridden to include additional details specific to online courses.
- isEligibleForCertificate(): Checks if the course duration is at least 10 hours to be eligible for a certificate.
- Getters: Methods to get the values of the additional attributes.

Main.java

```
    // Main class to test the Course and OnlineCourse classes
    public class Main {
        public static void main(String[] args) {
            // Create a Course object
            Course course = new Course("Java Programming", "Dr. Timaios Pliny",
            course.displayCourseDetails();
            System.out.println();

            // Create an OnlineCourse object
```

```
            OnlineCourse onlineCourse = new OnlineCourse("Advanced Java", "Prof
            onlineCourse.displayCourseDetails();
            System.out.println("Eligible for Certificate: " + onlineCourse.isEl
        }
    }
```

Explanation:

Main Class:

- Creates instances of Course and OnlineCourse and demonstrates the usage of their methods.

Output:

```
Course Name: Java Programming
Instructor: Dr. Timaios Pliny

Course Name: Advanced Java
Instructor: Prof. Isacco Lyuba
Credits: 4
Platform:  Google
Duration: 10 hours
Eligible for Certificate: true
```

Java Code Editor: