Part 9: Conditions - Java Challenges & Code

1. Check if a number is even and divisible by 5

```
import java.util.Scanner;

public class EvenAndDivisible {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = sc.nextInt();

        if (num % 2 == 0 && num % 5 == 0)
            System.out.println("The number is even and divisible by 5.");
        else
            System.out.println("The number does not meet both conditions.");
    }
}
```

2. Validate a triangle (sum of angles = 180)

```
import java.util.Scanner;

public class TriangleValidation {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter three angles: ");
        int a = sc.nextInt();
        int b = sc.nextInt();
        int c = sc.nextInt();

        if (a + b + c == 180)
            System.out.println("Valid triangle");
        else
            System.out.println("Invalid triangle");
    }
}
```

3. Check if year is a leap year

```
import java.util.Scanner;

public class LeapYearCheck {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a year: ");
        int year = sc.nextInt();

        if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0))
            System.out.println("Leap year");
        else
            System.out.println("Not a leap year");
```

```
    }
}
```

4. Check character type (vowel/consonant/digit/special)

```
import java.util.Scanner;

public class CharacterType {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a character: ");
        char ch = sc.next().charAt(0);

        if (Character.isDigit(ch))
            System.out.println("Digit");
        else if (Character.isLetter(ch)) {
            ch = Character.toLowerCase(ch);
            if ("aeiou".indexOf(ch) != -1)
                System.out.println("Vowel");
            else
                System.out.println("Consonant");
        } else
            System.out.println("Special character");
    }
}
```

5. Check eligibility for vote, driving, and job using conditions

```
import java.util.Scanner;

public class EligibilityCheck {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter age: ");
        int age = sc.nextInt();

        if (age >= 18)
            System.out.println("Eligible to vote");
        else
            System.out.println("Not eligible to vote");

        if (age >= 16)
            System.out.println("Eligible to drive");
        else
            System.out.println("Not eligible to drive");

        if (age >= 21)
            System.out.println("Eligible for job");
        else
            System.out.println("Not eligible for job");
    }
}
```