Q1

```java
import java.util.*;

class Q1{

public static void main(String [] arrgs){

Scanner scn = new Scanner (System.in);

System.out.println("Enter numerical grade: ");
int numerical_grade = scn.nextInt();

if (numerical_grade >=90){
System.out.println("A");
}

else if (numerical_grade >=80){
System.out.println("B");
}

else if (numerical_grade >=70){
System.out.println("C");
}

else if (numerical_grade >=60){
System.out.println("D");
}

else {
System.out.println("F");
}

}

}
```

Q2

```java
import java.util.Scanner;

class Q2 {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);

System.out.print("Enter a year: ");
int year = scanner.nextInt();

if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
```

```java
System.out.println(year + " is a leap year");
}
else {
System.out.println(year + " is not a leap year");

}

}

}


Q3

import java.util.Scanner;

class Q2 {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);

System.out.print("Enter a year: ");
int year = scanner.nextInt();

if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
System.out.println(year + " is a leap year");
}
else {
System.out.println(year + " is not a leap year");

}

}

}


Q4

import java.util.Scanner;

class Q4 {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);

 System.out.print("Enter weekday number (1-7): ");
        int weekdayNum = scanner.nextInt();
        String weekdayName;
        switch (weekdayNum) {
            case 1:
                weekdayName = "Monday";
```

```java
                break;
            case 2:
                weekdayName = "Tuesday";
                break;
            case 3:
                weekdayName = "Wednesday";
                break;
            case 4:
                weekdayName = "Thursday";
                break;
            case 5:
                weekdayName = "Friday";
                break;
            case 6:
                weekdayName = "Saturday";
                break;
            case 7:
                weekdayName = "Sunday";
                break;
            default:
                System.out.println("Invalid weekday number");
                return;
        }
        System.out.println("Weekday: " + weekdayName);

    }

}


Q5

import java.util.Scanner;

class Q5 {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);

    System.out.print("Enter a character: ");
        char ch = scanner.next().charAt(0);
        if (Character.isLetter(ch)) {
            ch = Character.toLowerCase(ch);
            if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
                System.out.println("Vowel");
            } else {
                System.out.println("Consonant");
            }
        } else {
            System.out.println("Invalid input");
        }
```

```
    }

}


Q6

import java.util.Scanner;

class Q6 {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);

        System.out.print("Enter height in meters: ");
        double height = scanner.nextDouble();
        System.out.print("Enter weight in kilograms: ");
        double weight = scanner.nextDouble();
        double bmi = weight / (height * height);
        if (bmi < 18.5) {
            System.out.println("Underweight");
        } else if (bmi < 25) {
            System.out.println("Normal weight");
        } else if (bmi < 30) {
            System.out.println("Overweight");
        } else {
            System.out.println("Obesity");
        }

        scanner.close();
    }
}
```