Assignment 2

Instructions:

- Solve the tasks below using Dart programming.
- Save your code in a file named `dart_conditions.dart`.
- Ensure your code is clean and well-commented.

Task 1: Checking Even or Odd

1. Write a program to check whether a given number is even or odd.
2. Use an `if-else` statement.
3. Print a message like:
    - "The number 8 is even."
    - "The number 7 is odd."

Task 2: Grading System

1. Create a variable `marks` to store a student's marks (out of 100).
2. Use `if`, `else if`, and `else` statements to assign grades based on the following criteria:
    - Marks >= 90: Grade A
    - Marks >= 80: Grade B
    - Marks >= 70: Grade C
    - Marks >= 60: Grade D
    - Marks < 60: Fail
3. Print the grade with a message (e.g., "Marks: 85, Grade: B").

Task 3: Logical Operator Practice

1. Declare three `bool` variables: `hasLicense`, `isOver18`, and `ownsCar`.
2. Use logical operators (`&&`, `||`, `!`) and `if-else` statements to determine:

- If the person can legally drive a car.
    - If the person doesn't own a car but meets the other conditions, print: "You can rent a car."
    - If neither condition is met, print: "You cannot drive."

Task 4: Operator Precedence

Declare a variable `result` and calculate the following expression:
int a = 5, b = 10, c = 15;
var result = a + b * c - (a + b) * c;

1.
2. Print the value of `result`.
3. Explain the output in comments, highlighting the precedence of operators used in the calculation.

Task 5: Simple Password Checker

1. Create a `String` variable `password` and assign a password (e.g., "flutter123"). 2. Ask the user to input a password.
3. Use an `if-else` statement to check:
    - If the entered password matches `password`, print: "Access granted."
    - Otherwise, print: "Access denied."

Submission Guidelines:

- Test your code with different inputs to ensure it works correctly.
- Add comments explaining the logic of each task.
- Submit your assignment by the due date.