

## 1. The Grade Classifier

Write a program that takes an integer score (0-100) and prints the corresponding letter grade.

90-100: "A"

80-89: "B"

70-79: "C"

60-69: "D"

0-59: "F"

Sample Input: 85

Sample Output: B

## 2. The Vending Machine

Simulate a vending machine. Use switch statement with codes:

1: "Cola", 2: "Chips", 3: "Candy", 4: "Water", 5: "Pretzels"

Default: Invalid code.

Sample Input: 3

Sample Output: Candy

## 3. Nested Age and License Check

Check if a person can rent a car:

- At least 25 years old -> approved.
- If under 25 -> must be 21+ AND have waiver.

Sample Input: age = 22, hasWaiver = true

Sample Output: Car rental approved with waiver.

## 4. Days in a Month (Switch with Fall-through)

Take month (1-12) and print days. Not leap year.

31 days: 1,3,5,7,8,10,12

30 days: 4,6,9,11

28 days: 2

Sample Input: 9

Sample Output: This month has 30 days.

## 5. The Ternary Operator Challenge

Rewrite even/odd check using ternary operator.

Original:

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if (number % 2 == 0) result="Even"; else result="Odd";
```

Sample Input: number = 15

Sample Output: Odd

## 6. Traffic Light Simulator

Takes String color (case-insensitive). Use switch:

RED -> Stop

YELLOW -> Prepare to stop

GREEN -> Go

Sample Input: "yellow"

Sample Output: Prepare to stop

## 7. The Triangle Type Identifier

Given three sides a, b, c:

- Equilateral: all equal

- Isosceles: two equal

- Scalene: all different

Sample Input: a=7, b=7, c=4

Sample Output: Isosceles Triangle

## 8. The Login System

Check login with stored credentials ("admin","password123").

- Correct: Login successful.

- Wrong username: Username not found.

- Wrong password: Incorrect password.

Sample Input: username="admin", password="wrongpassword"

Sample Output: Incorrect password.

## 9. Weekend or Weekday?

Takes day name, prints Weekday or Weekend using switch.

Sample Input: "Sunday"

Sample Output: Weekend

## 10. The Discount Calculator

Store discounts:

- >1000 -> 20%

- >500 & <=1000 -> 10%

- <=500 -> none

Sample Input: purchaseAmount=750.0

Sample Output: Final price after 10% discount: \$675.0